RSTS/E

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THE SOFTWARE DISPATCH

digital

RSTS/E SOFTWARE DISPATCH

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The RSTS/E Software Dispatch complements the Software Dispatch Review for RSTS/E V6C-03. New and revised Software Product Descriptions, programming notes, software problems and solutions, and documentation corrections are published here. Much of the material is developed from Software Performance Report (SPR) answers significant to the general audience and is printed here to supplement the maintenance notebook (established by the Software Dispatch Review).

PRODUCTS SUPPORTED in the RSTS/E SOFTWARE DISPATCH

APL-11 V1
ASSIST-11 V1
BASIC-PLUS-2 V1
BASIC-PLUS-2/RMS-11K V1
COBOL-11 V3
CTS11/RSTS/E V1.1
CTS-500 V3
CTS-500/2780 V3
DATATRIEVE-11 V1
DECAL V2
DECnet/E V1
DIBOL-11/DECFORM V1, V4
DMS-500 V2
FORTRAN IV/RSTS-E V2
PLOT 11/RSTS/E V1.1
RMS-11K V1.5
RPG II V8.02
RSTS/E V6C
RSTS-E/2780 V3
SORT-11 V2
VT55 BASIC-PLUS-2 V1
WISE V1

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SPR USER LETTER

The Dispatch **SPR User Letter** has been revised to reflect the new SPR form which has been available and has been in distribution for several months. This new SPR form can be readily identified by the priority section which uses a 1-5 numbering scheme rather than high, medium and low. These forms can be obtained from your local Digital office or SPR Center or by requesting them from SPR Administration.

How To Make The Best Use Of The SPR Form

What We Can Do For you

1. Blank SPR forms are available upon request in the desired quantities through the SPR Administration (P.O. Box F) and your local office/SPR Center.

2. Copies of the SPR acknowledgement and answer are sent to the appropriate DIGITAL Office/SPR Center for their information.

3. Your local office is provided status for submitted SPRs upon request by contacting SPR Administration.

4. Information is provided to the pertinent District Software Managers on High Priority SPRs that are submitted by customers in their districts.

5. SPRs marked PROBLEM/Error will have a response for supported Category A and B products. These SPRs should refer to suspected deficiencies in the software.

6. SPRs marked SUGGESTION are forwarded to the pertinent software group for information purposes, and are responded to at their discretion.

What You Can Do For Us

1. Customer Name and Address and Problem Statement should always be typed or printed clearly.

2. An SPR should be submitted with only one problem on it. Putting more than one problem on an SPR can greatly lengthen the turn-around time.

3. WHENEVER POSSIBLE, SUBMIT AN SPR WITH ATTACHMENTS, SUCH AS MACHINE READABLE DATA, DETAILED INSTRUCTIONS ON HOW TO REPRODUCE THE PROBLEM, PROGRAM AND/OR DATA FILES, LISTINGS, AND CONSOLE LOG.

4. It would be most helpful to all concerned if problems with patches are reported as soon as possible.

5. For security SPRs, it is imperative that the DO NOT PUBLISH box be marked.

6. It would be helpful if tapes submitted with SPRs are labeled (track and density), and have a directory attached.

7. Should you ever receive an unacceptable SPR response, please contact us or the appropriate SPR Center so that the response may be addressed.

8. SPRs should not be used for problems concerning software policy, software distribution, or hardware. The local office should be contacted in these cases.

7.2 Commonly Used System Programs (CUSPs) Patch Levels

This report reflects the current Version/Edit level of all of the Commonly Used System Programs (CUSPs) supplied as part of the standard RSTS/E V06C-03 System Library Programs release.

System Utilities Package

BUILD	V06C-03	DIRECT	V06C-03ABCD	DISPLY	V06C-03ABC	VT05	V06C-03
VT50	V06C-03	DSKINT	V06C-03	GRIPE	V06C-03	INIT	V06C-03A
INUSE	V06C-03	LOGIN	V06C-03	LOGOUT	V06C-03A	MONEY	V06C-03
ODT	V06C-03A	PLEASE	V06C-03	PRIOR	V06C-03	QUOLST	V06C-03
REACT	V06C-03	REORDR	V06C-03A	SHUTUP	V06C-03	SWITCH	V06C-03
SYSCAT	V06C-03	SYSTAT	V06C-03ABC	TALK	V06C-03	TTYSET	V06C-03
UMOUNT	V06C-03ABC	UTILTY	V06C-03	UTILT1	V06C-03AB		

Data Manipulation Package

BPCREF	V06C-03AB	BPCRF1	V06C-03	COPY	V06C-03	EDIT	V06C-03AB
EDITCH	V06C-03A	FILCOM	V06C-03A	FLINT	V06C-03ABC	FLX	V06C-03A
MAKRTS	V06C-03	PIPSML	V06C-03	PIPEXT	V06C-03ABC	PMDUMP	V06C-03A
RUNOFF	V06C-03ABC						

Error Control Package

ANALY1	V06C-03	ANALYS	V06C-03A	ERRBLD	V06C-03	ERRCPY	V06C-03
ERRDET	V06C-03A	ERRDIS	V06C-03	ERRINT	V06C-03		

Backup Package

BACCOM	V06C-03ABC	BACCON	V06C-03AB	BACDEL	V06C-03	BACDIR	V06C-03AB
BACDMP	V06C-03A	BACDSK	V06C-03A	BACENT	V06C-03A	BACFRM	V06C-03ABCDEF
BACLAB	V06C-03	BACLOD	V06C-03AB	BACLST	V06C-03AB	BACMNT	V06C-03ABCDEF
BACPRM	V06C-03	BACKTO	V06C-03ABCDEF			BACKUP	V06C-03ABCD

Spooling and Operator Services Package

OPSER	V06C-03	OPSRUN	V06C-03AB				
QUE	V06C-03ABCDEFGH	QUEMAN	V06C-03	QUMRUN	V06C-03AB		
CHARS	V06C-03	SPOOL	V06C-03	SPLIDL	V06C-03	SPLRUN	V06C-03AB
BATDCD	V06C-03	BATCH	V06C-03	BATIDL	V06C-03A		
BATDEC	V06C-03ABCDEFGH	BATRUN	V06C-03ABCDE				

User Environment Test Package

UETP	V06C-03A	ACCTST	V06C-03A	AC0TST	V06C-03A	AC1TST	V06C-03A
AC2TST	V06C-03A	AC3TST	V06C-03A	AC4TST	V06C-03A	AC5TST	V06C-03A
DBEXER	V06C-03	DPEXER	V06C-03	DREXER	V06C-03	DMEXER	V06C-03
DSEXER	V06C-03	DFEXER	V06C-03	DKEXER	V06C-03	DXEXER	V06C-03
MTEXER	V06C-03	DTEXER	V06C-03	CPEXER	V06C-03	CREXER	V06C-03
PPEXER	V06C-03	PREXER	V06C-03	KBEXER	V06C-03	LPEXER	V06C-03
SCRIPT	V06C-03	SCRPTB	V06C-03	CVTSCP	V06C-03	OPTPRM	V06C-03
OPTPRK	V06C-03	OPTPRB	V06C-03	TDLSRT	V06C-03	TDLXQK	V06C-03
TDLMQK	V06C-03	TDLOQK	V06C-03	TDLSQK	V06C-03A	CRFILE	V06C-03A
TAPSRT	V06C-03	TAPSRU	V06C-03	DECMRG	V06C-03A	VERIFY	V06C-03
RANMAK	V06C-03	JSTATS	V06C-03	DSTATS	V06C-03	CPUTST	V06C-03
FILMIN	V06C-03	CRUDAT	V06C-03	FLOPPY	V06C-03A	CRDATA	V06C-03A
BUILDR	V06C-03A	PKBSNE	V06C-03				

Automated Patching Facility Package

AUTOED	V06C-03	CPATCH	V06C-03	PATCPY	V06C-03	PBUILD	V06C-03ABCD

DECnet/E Utilities

NCROOT	V06C-03AB	NETFNC	V06C-03	NCP	V06C-03A	NCU	V06C-03AB
NIP	V06C-03	LSN	V06C-03	TLK	V06C-03A		

RSTS/E VØ6C-Ø3
RSTS/E 278Ø Device Driver
278Ø Device Driver Patches

Seq 5.1.7 M

GET/PUT INTERLOCK ERROR - MANDATORY 278Ø DEVICE DRIVER PATCH

PROBLEM:

Due to timing considerations on systems with zero turn-around delay, it is possible for a bid from a remote unit to be processed before the completion of the routine for End Of Transmission. This causes the driver to receive the bid when it "thinks" it is in transmit mode and the GET/PUT INTERLOCK error is triggered.

SOLUTION:

The patching procedure detailed below corrects the above problem by allowing a bid to be processed even if the End Of Transmission routine is not yet done.

PROCEDURE:

1. This is a required patch to the RSTS/E 278Ø Device Driver. It must be installed in all target monitor SILs configured with the 278Ø Device Driver.

2. The patch described in Step 4 below can be installed using the PATCH option after bootstrapping your system disk:

```
Option: PATCH
File to patch? <lf>              (LINE FEED for installed monitor SIL)
```

3. This patch can be installed manually using ONLPAT, the on-line patching program:

```
RUN $ONLPAT
Command file name? <cr>          (RETURN for manual patch installation)
File to patch? <lf>              (LINE FEED for installed monitor SIL)
File found in account [Ø,1]
```

   For automated patching, the patch is contained in a command file ($RJ278Ø.CMD) appearing in patch kit version "G" or later.

4. The patch is as follows:

```
Module name? RJ2780
Base address? RJDV0
Offset address? 2714
 Base    Offset  Old      New?
120000  002714  105767  ? 137
120000  002716  ??????  ? RJEPAT+142
120000  002720  001733  ? 240
120000  002722  105767  ? ^Z            (CTRL/Z for new offset)
Offset address? ^Z                      (CTRL/Z for new base)
Base address? RJEPAT
Offset address? 142
 Base    Offset  Old      New?
??????  000142  000000  ? 105737
??????  000144  000000  ? RDWRT
??????  000146  000000  ? 1401
??????  000150  000000  ? 406
??????  000152  000000  ? 22737
??????  000154  000000  ? EOTMSG
??????  000156  000000  ? PTDBF+2
??????  000160  000000  ? 1402
??????  000162  000000  ? 137
??????  000164  000000  ? RJDV0+2610
??????  000166  000000  ? 137
??????  000170  000000  ? RJDV0+2722
??????  000172  ??????  ? ^C          (up-arrow/C to exit; CTRL/C for INIT)
```

RSTS/E VØ6C-Ø3
RSTS/E 278Ø Device Driver
278Ø Device Driver Patches

Seq 5.1.8 M

278Ø HANDLER FAILURE ERROR - MANDATORY 278Ø DEVICE DRIVER PATCH

PROBLEM:

When the RSTS/E system is under heavy load, it is possible for the notification of the receipt of a bid to be passed back with a receive buffer address of zero. When the driver attempts to requeue the buffer, it is considered a fatal error.

SOLUTION:

The patching procedure detailed below corrects the above problem by making the driver wait for another bid when this condition occurs.

PROCEDURE:

1. This is a required patch to the RSTS/E 278Ø Device Driver. It must be installed in all target monitor SILs configured with the 278Ø Device Driver.

2. The patch described in Step 4 below can be installed using the PATCH option after bootstrapping your system disk:

```
Option: PATCH
File to patch? <lf>            (LINE FEED for installed monitor SIL)
```

3. This patch can be installed manually using ONLPAT, the on-line patching program:

```
RUN $ONLPAT
Command file name? <cr>        (RETURN for manual patch installation)
File to patch? <lf>            (LINE FEED for installed monitor SIL)
File found in account [Ø,1]
```

For automated patching, the patch is contained in a command file ($RJ278Ø.CMD) appearing in patch kit version "G" or later.

4. The patch is as follows:

```
Module name? RJ2780
Base address? RJDV0
Offset address? 3102
 Base    Offset  Old      New?
120000  003102  016067   ? 137
120000  003104  000002   ? RJEPAT+172
120000  003106  ??????   ? 240
120000  003110  112767   ? ^Z            (CTRL/Z for new offset)
Offset address? ^Z                      (CTRL/Z for new base)
Base address? RJEPAT
Offset address? 172
 Base    Offset  Old      New?
??????  000172  000000   ? 16037
??????  000174  000000   ? 2
??????  000176  000000   ? ASNBF+2
??????  000200  000000   ? 1402
??????  000202  000000   ? 137
??????  000204  000000   ? RJDV0+3110
??????  000206  000000   ? 137
??????  000210  000000   ? RJDV0+3012
??????  000212  ??????   ? ^C            (up-arrow/C to exit; CTRL/C for INIT)
```

RSTS/E V06C-03
RSTS/E 2780 Device Driver
2780 Device Driver Patches

Seq 5.1.9 M

LOCAL BINARY TRANSMIT FAILURE - MANDATORY 2780 DEVICE DRIVER PATCH

PROBLEM:

If the default transmit command is 2780 or GEN, it should be possible to send, as part of a multiple file transfer, a file or files in binary mode. This is done by using the "/B" switch to override the transmit command for those files which should be sent untranslated. Currently, the mode of the first file controls the mode for the complete transfer.

SOLUTION:

The patching procedure detailed below corrects the above problem with the processing of the "/B" switch.

NOTE

The mandatory RJ2780.BAS patch described in article Seq 25.2.2 M, published in this issue, must be installed along with this patch.

PROCEDURE:

1. This is a required patch to the RSTS/E 2780 Device Driver. It must be installed in all target monitor SILs configured with the 2780 Device Driver.

2. The patch described in Step 4 below can be installed using the PATCH option after bootstrapping your system disk:

```
Option: PATCH
File to patch? <lf>            (LINE FEED for installed monitor SIL)
```

3. This patch can be installed manually using ONLPAT, the on-line patching program:

```
RUN $ONLPAT
Command file name? <cr>        (RETURN for manual patch installation)
File to patch? <lf>            (LINE FEED for installed monitor SIL)
File found in account [0,1]
```

For automated patching, the patch is contained in a command file ($RJ2780.CMD) appearing in patch kit version "G" or later.

4. The patch is as follows:

```
Module name? RJ2780
Base address? RJDV0
Offset address? 1654
 Base    Offset  Old      New?
120000  001654  004767  ? 137
120000  001656  000622  ? RJEPAT+212
120000  001660  100413  ? ^Z            (CTRL/Z for new offset)
Offset address? ^Z                      (CTRL/Z for new base)
Base address? RJEPAT
Offset address? 212
 Base    Offset  Old      New?
??????  000212  000000  ? 16300
??????  000214  000000  ? 10
??????  000216  000000  ? 105037
??????  000220  000000  ? NATIV
??????  000222  000000  ? 42737
??????  000224  000000  ? 10
??????  000226  000000  ? PTCPAR+2
??????  000230  000000  ? 105237
??????  000232  000000  ? NATIV
??????  000234  000000  ? 6000
??????  000236  000000  ? 103005
??????  000240  000000  ? 105037
??????  000242  000000  ? NATIV
??????  000244  000000  ? 52737
??????  000246  000000  ? 10
??????  000250  000000  ? PTCPAR+2
??????  000252  000000  ? 12701
??????  000254  000000  ? PTCPAR
??????  000256  000000  ? 4737
??????  000260  000000  ? RJDV0+420
??????  000262  000000  ? 100404
??????  000264  000000  ? 4737
??????  000266  000000  ? RJDV0+2502
??????  000270  000000  ? 137
??????  000272  000000  ? RJDV0+1660
??????  000274  000000  ? 137
??????  000276  000000  ? RJDV0+2634
??????  000300  ??????  ? ^C            (up-arrow/C to exit; CTRL/C for INIT)
```

RSTS/E VØ6C-Ø3
System Utilities Package
DISPLY

Seq 1Ø.4.3 M

INCORRECT 'UP TIME' IF CHANGE IN YEAR - MANDATORY DISPLY PATCH

PROBLEM:

Up time is printed as "???:??:?" if the year has changed since the system was started.

SOLUTION:

The patching procedure detailed below corrects the above problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - DISPLY.BAS=DISPLY.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : Ø3AB
*G/Ø3AB/I/C/V<cr>
6!              EDIT            : Ø3ABC
*H/7!/V<cr>
7!              EDIT DATE       : 13-OCT-78
*G/13-OCT-78/-9C/26-MAR-79/V<cr>
7!              EDIT DATE       : 26-MAR-79
*H/21!/G/REASON/V<cr>
21!     VER/ED          EDIT DATE       REASON
*I<cr>
<If>
  !<tab>6C-Ø3ABC<tab>26-MAR-79<tab>FIX YEAR CHANGE PROBLEM.<esc>*V<cr>
  !     6C-Ø3ABC        26-MAR-79       FIX YEAR CHANGE PROBLEM.
```

```
*H/1460<tab>/V<cr>
1460    T%=FNV%(63%+16384%,0%,FNT$(((PEEK(512%)-PEEK(36%))*1440.+
*I<cr>
J%=PEEK(36%)/1000%+2%<lf>
<tab>\ J1%=(PEEK(512%)/1000%<>PEEK(36%)/1000%)<lf>
<tab>\ J1%=635%+((J%/4%*4%)=J%) IF J1%<lf>
<tab>\ <esc>*V<cr>
        \ T%=FNV%(63%+16384%,0%,FNT$(((PEEK(512%)-PEEK(36%))*1440.+
*G/36%)/I/-J1%/V<cr>
        \ T%=FNV%(63%+16384%,0%,FNT$(((PEEK(512%)-PEEK(36%)-J1%)*1440.+
*2AV<cr>
        ! DETERMINE/PRINT THE 'UP TIME'
*G/TIME'/I/ - ADJUST FOR CHANGE IN YEAR./V<cr>
        ! DETERMINE/PRINT THE 'UP TIME' - ADJUST FOR CHANGE IN YEAR.
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD DISPLY<cr>

Ready

APPEND VTxx.DPY<cr>

Ready

COMPILE $VTxxPY<cr>

Ready

RUN $PIP<cr>
#=$VTxxPY.BAC<232>/RE<cr>
#^Z

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E VØ6C-Ø3
System Utilities Package
SYSTAT

Seq 1Ø.23.3 M

INCORRECT 'UP TIME' IF CHANGE IN YEAR - MANDATORY SYSTAT PATCH

PROBLEM:

SYSTAT prints up time as "???:??:?" if the year has changed since the system was started.

SOLUTION:

The patching procedure detailed below corrects the above problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - SYSTAT.BAS=SYSTAT.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : Ø3AB
*G/Ø3AB/I/C/V<cr>
6!              EDIT            : Ø3ABC
*H/7!/V<cr>
7!              EDIT DATE       : 21-FEB-78
*G/21-FEB-78/-9C/26-MAR-79/V<cr>
7!              EDIT DATE       : 26-MAR-79
*H/21!/G/REASON/V<cr>
21!     VER/EDIT        EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-Ø3ABC<tab>26-MAR-79<tab>FIX YEAR CHANGE PROBLEM.<esc>*V<cr>
  !     6C-Ø3ABC        26-MAR-79       FIX YEAR CHANGE PROBLEM.
*H/1Ø1Ø<tab>/V<cr>
1Ø1Ø    I$="VØ6C-Ø3AB"
*G/Ø3AB/I/C/V<cr>
1Ø1Ø    I$="VØ6C-Ø3ABC"
```

```
*H/10010<tab>/V<cr>
10010    PRINT #O%,C$;CVT$$(RIGHT(SYS(CHR$(6%)+CHR$(9%)+CHR$(0%)),3%),4%);
*2AV<cr>
        \ T=((PEEK(512%)-PEEK(36%))*1440.+PEEK(38%)-PEEK(514%))
*I<cr>
<tab>\ J%=(PEEK(36%)/1000%)+2%<lf>
<tab>\ J2%=(PEEK(512%)/1000%<>PEEK(36%)/1000%)<lf>
<tab>\ J2%=635%+((J%/4%*4%)=J%) IF J2%<lf>
<esc>*V<cr>
        \ T=((PEEK(512%)-PEEK(36%))*1440.+PEEK(38%)-PEEK(514%))
*G/36%)/I/-J2%/V<cr>
        \ T=((PEEK(512%)-PEEK(36%)-J2%)*1440.+PEEK(38%)-PEEK(514%))
*13AV<cr>
        ! CLEAR THE JOB # VARIABLE.
*I<cr>
<tab>! CHECK FOR YEAR CHANGE AND ADJUST IF NECESSARY.<lf>
<esc>*V<cr>
        ! CLEAR THE JOB # VARIABLE.
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD SYSTAT<cr>

Ready

COMPILE $SYSTAT<cr>

Ready

RUN $PIP<cr>
*=$SYSTAT.BAC<232>/RE<cr>
*^Z

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E VØ6C-Ø3
Error Control Package
ANALYS

INCORRECT 'UP TIME' IF CHANGE IN YEAR - MANDATORY ANALYS PATCH

PROBLEM:

ANALYS prints up time as "???:??:?" if the year has changed since the system was started.

SOLUTION:

The patching procedure detailed below corrects the above problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - ANALYS.BAS=ANALYS.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!                EDIT            : Ø3
*G/Ø3/I/A/V<cr>
6!                EDIT            : Ø3A
*H/7!/V<cr>
7!                EDIT DATE       : 3Ø-NOV-77
*G/3Ø-NOV-77/-9C/26-MAR-79/V<cr>
7!                EDIT DATE       : 26-MAR-79
*H/2Ø/G/REASON/V<cr>
  !     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-Ø3A<tab><tab>26-MAR-79<tab>FIX YEAR CHANGE PROBLEM.<esc>*V<cr>
  !     6C-Ø3A          26-MAR-79       FIX YEAR CHANGE PROBLEM.
*H/1Ø1Ø<tab>/V<cr>
1Ø1Ø    I$="VØ6C-Ø3"
*G/Ø3/I/A/V<cr>
1Ø1Ø    I$="VØ6C-Ø3A"
```

```
*H/10010<tab>/V<cr>
10010   PRINT #1%,C$;"Crash Dump Status From ";DATE$(FNP%(512%));
*2AV<cr>
        \ T=((FNP%(512%)-FNP%(36%))*1440.+FNP%(38%)-FNP%(514%))
*I<cr>
<tab>\ J%=(FNP%(36%)/1000%)+2%<lf>
<tab>\ J2%=(FNP%(512%)/1000%<>FNP%(36%)/1000%)<lf>
<tab>\ J2%=635%+((J%/4%*4%)=J%) IF J2%<lf>
<esc>*V<cr>
        \ T=((FNP%(512%)-FNP%(36%))*1440.+FNP%(38%)-FNP%(514%))
*G/36%)/I/-J2%/V<cr>
        \ T=((FNP%(512%)-FNP%(36%)-J2%)*1440.+FNP%(38%)-FNP%(514%))
*10AV<cr>
        ! INIT THE JOB # VARIABLE
*I<cr>
<tab>! CHECK FOR YEAR CHANGE AND ADJUST IF NECESSARY.<lf>
<esc>*V<cr>
        ! INIT THE JOB # VARIABLE
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD ANALYS<cr>

Ready

COMPILE $ANALYS<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E VØ6C-Ø3
Backup Package
BACDMP

Seq 13.6.1 M

BACDMP DOES NOT HANDLE END-OF-TAPE PROPERLY - MANDATORY BACDMP PATCH

PROBLEM:

BACDMP aborts with a fatal error message if it encounters an end-of-tape mark while it is writing an end-of-file mark to a magnetic tape backup set.

If the end-of-tape mark is encountered while writing index data on the magnetic tape, BACDMP may issue a fatal error message and abort or it may recover. If it recovers, it may leave part of an index on the current volume. A fatal error will result if an attempt is made to read such a partial index during a subsequent restore operation.

Note that if BACDMP does not abort, it will write a complete index on one of the volumes of the backup set, although it may not always write both the primary and secondary indexes.

SOLUTION:

The patching procedure detailed below will cause BACDMP to recover correctly on encountering an end-of-tape marker. The current tape will be terminated so as not to leave a partial index on the volume that could cause a fatal error on a restore operation. If necessary, another volume will be requested to hold one or both of the indexes that have not been completely transferred.

NOTE

> The mandatory BACKTO patch described in article Seq 13.15.6 M and the mandatory BACLST patch described in article Seq 13.12.3 M, both published in this issue, must be installed along with this patch to completely solve the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - BACDMP.BAS=BACDMP.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : 03
*G/03/I/A/V<cr>
6!              EDIT            : 03A
*H/7!/V<cr>
7!              EDIT DATE       : 30-NOV-77
*G/30-NOV-77/-9C/20-MAR-79/V<cr>
7!              EDIT DATE       : 20-MAR-79
*H/20/G/REASON/V<cr>
  !     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-03A<tab><tab>20-MAR-79<tab>FIX END-OF-TAPE PROBLEMS.<esc>*V<cr>
  !     6C-03A          20-MAR-79       FIX END-OF-TAPE PROBLEMS.
*H/1010<tab>/V<cr>
1010    I$="BACDMP      V06C-03"
*G/03/I/A/V<cr>
1010    I$="BACDMP      V06C-03A"
*H/1110<tab>/V<cr>
1110    C%(1%)=Z0%(0%,27%)
*G/16384%/V<cr>
        \ Z0%(C%(1%),31%)=Z0%(C%(1%),31%) OR 16384%
*I<cr>
<lf>
<tab><tab>\ Z0%(C%(1%),23%),Z0%(C%(1%),25%)=0%<esc>*V<cr>
                \ Z0%(C%(1%),23%),Z0%(C%(1%),25%)=0%
*H/1115<tab>/V<cr>
1115    M9%=PEEK(PEEK(PEEK(PEEK(520%))+12%)+4%)-1%
*G/12000/V<cr>
        \ GOSUB 12000 IF I1%<>0%
*11DV<cr>
        \ GOSUB 12000
*H/1130<tab>/V<cr>
1130    IF (Z0%(0%,29%) AND 32%)<>0% THEN Z0%(0%,29%)=64%
*G/64%/I<cr>
<lf>
<tab><tab><tab><tab>\ GOTO 1150 IF T9%<esc>*V<cr>
                                \ GOTO 1150 IF T9%
*H/10205<tab>/V<cr>
10205   ON ERROR GOTO 19000
*G/-1%/V<cr>
        \ C%=-1%
*I<cr>
<lf>
<tab>\ L1%=-1%<esc>*V<cr>
        \ L1%=-1%
*G/0%/V<cr>
        \ GOSUB 10650 IF M%<>0%
```

```
*I<cr>
<lf>
<tab>\ L1%=0%<esc>*V<cr>
        \ L1%=0%
*H/10705<tab>/V<cr>
10705   GOTO 10715 IF (E%<>4%) AND (E%<>13%) AND (E%<>11%)
*G/-1%/V<cr>
        \ T9%=-1%
*I<cr>
<lf>
<tab>\ GOTO 13000 IF M%<esc>*V<cr>
        \ GOTO 13000 IF M%
*H/11170<tab>/V<cr>
11170   Z%=MAGTAPE(4%,32767%,6%) IF M%<>0%
*G/0%/I/ AND T9%=0%/V<cr>
11170   Z%=MAGTAPE(4%,32767%,6%) IF M%<>0% AND T9%=0%
*H/12005<tab>/V<cr>
12005   GOTO 12090 IF (R% AND 1%)<>0%
*G/I2%/I/ IF I1%/V<cr>
        \ Z0%(C%(1%),24%)=I2% IF I1%
*H/12020<tab>/V<cr>
12020   Z0%(C%(1%),30%)=Z0%(C%(1%),30%) OR 16384%
*G/16384%/I/ IF I1%/V<cr>
12020   Z0%(C%(1%),30%)=Z0%(C%(1%),30%) OR 16384% IF I1%
*H/12096<tab>/V<cr>
12096   T%=T%+1%
*12AV<cr>

*I<cr>
<cr>
13000<tab>GOTO 10490 IF ERL=10490% AND T9%<lf>
<tab><tab>! CONTINUE IF ERROR WAS ON BACKSPACING AT END OF INDEX.<lf>
<cr>
13010<tab>ON ERROR GOTO 13100<lf>
<tab>\ L2%=ERL<lf>
<tab>\ I1%=0% UNLESS L2%=10490%<lf>
<tab>\ GOTO 13050 UNLESS M%<lf>
<tab>\ T9%=-1%<lf>
<tab>\ Z1%=1%<lf>
<tab>\ Z1%=2% IF L2%=10205% OR (L2%=10680% AND L1%=0%)<lf>
<tab>\ Z1%=Z1%-1% UNLESS L2%=10680% OR ERR=4%<lf>
<tab><tab>! FLAG THE INDEX DIDN'T MAKE IT UNLESS IT DID.<lf>
<tab><tab>! SKIP MAGTAPE STUFF IF NOT MAGTAPE.<lf>
<tab><tab>! FLAG THAT WE ARE TERMINATING THIS VOLUME.<lf>
<tab><tab>! CALCULATE HOW MANY EOF'S WE SHOULD BACKSPACE OVER<lf>
<tab><tab>! SO AS NOT TO LEAVE A PARTIAL INDEX ON THIS VOLUME.<lf>
<cr>
13020<tab>FOR Z%=1% TO Z1%<lf>
<tab>\ Z0%=MAGTAPE(5%,32767%,6%)<lf>
<tab><tab>! START BACKSPACING TO THE LAST EOF.<lf>
<cr>
13030<tab>Z0%=MAGTAPE(5%,32767%,6%) UNTIL (MAGTAPE(7%,0%,6%) AND 128%)<lf>
<tab>\ NEXT Z%<lf>
<tab>\ Z1%=3%<lf>
<tab><tab>! CONTINUE BACKSPACING AS LONG AS NECESSARY TO GET<lf>
<tab><tab>! BACK PAST LAST EOF.<lf>
```

```
<tab><tab>! SET UP TO WRITE THREE EOF MARKS.<lf>
<cr>
13040<tab>Z0%=MAGTAPE(2%,0%,6%) FOR Z%=1% TO Z1%<lf>
<tab><tab>! WRITE THE EOF MARKS.<lf>
<cr>
13050<tab>ON ERROR GOTO 19000<lf>
<tab>\ GOTO 10490 IF L2%=10490%<lf>
<tab>\ Z0%(C%(1%),31%)=(Z0%(C%(1%),31%) AND NOT 16384%)<lf>
<tab><tab>UNLESS (Z0%(C%(1%),30%) AND 16384%)<lf>
<tab>\ GOTO 10490 IF L2%=10205%<lf>
<tab>\ GOTO 10690 IF L2%=10680%<lf>
<tab>\ GOTO 1150<lf>
<tab><tab>! IF NO INDEX INFO WRITTEN ON THIS VOLUME, SAY SO.<lf>
<tab><tab>! GO FINISH UP FOR THIS VOLUME.<lf>
<cr>
13100<tab>GOTO 19000 UNLESS ERR=4% OR ERR=11% OR ERR=13%<lf>
<tab>\ RESUME 13030 IF ERL=13020% OR ERL=13030%<lf>
<tab>\ GOTO 19000 UNLESS ERL=13040%<lf>
<tab>\ Z1%=Z1%-1%<lf>
<tab>\ RESUME 13040<lf>
<tab><tab>! WE EXPECT ONLY 'NO ROOM' OR 'BAD BLOCK' ERRORS HERE.<lf>
<tab><tab>! IF ERROR ON BACKSPACE, KEEP ON BACKSPACING.<lf>
<tab><tab>! IF ERROR ON WRITING EOF MARKS, KEEP ON WRITING THEM.<lf>
<esc>*V<cr>

*H/19020<tab>/V<cr>
19020    E%=ERR IF E%=0%
*AI<cr>
<tab>\ GOTO 13000 IF (ERR=4% OR ERR=11% OR ERR=13%) AND<lf>
<tab><tab>(ERL=1115% OR ERL=10205% OR ERL=10490%)<lf>
<esc>*V<cr>
        \ T$=RIGHT(SYS(CHR$(6%)+CHR$(9%)+CHR$(E% AND 63%)),4%)
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD BACDMP<cr>

Ready

COMPILE $BACDMP<cr>

Ready

RUN $PIP<cr>
*=$BACDMP.BAC<232>/RE<cr>
*^Z

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E VØ6C-Ø3
Backup Package
BACLST

Seq 13.12.3 M

BACLST FAILS TO IDENTIFY SECONDARY INDEX VOLUME - MANDATORY BACLST PATCH

PROBLEM:

BACLST currently identifies the volume containing the primary index with "(Index)" after the volume number. Consequently if the primary and secondary indexes are written on different volumes, only the first volume will be identified as the index volume.

SOLUTION:

The patching procedure detailed below will cause BACLST to identify a volume containing both the primary and secondary indexes with "(Index)", a volume containing only the primary index with "(Pri Index)", and a volume containing only the secondary index with "(Sec Index)".

NOTE

The mandatory BACDMP patch described in article Seq 13.6.1 M and the mandatory BACKTO patch described in article Seq 13.15.6 M, both published in this issue, must be installed along with this patch to completely solve the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - BACLST.BAS=BACLST.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            : Ø3A
*G/Ø3A/I/B/V<cr>
6!              EDIT            : Ø3AB
```

```
*H/7!/V<cr>
7!              EDIT DATE       : 19-JAN-79
*G/19-JAN-79/-9C/20-MAR-79/V<cr>
7!              EDIT DATE       : 20-MAR-79
*G/20/G/REASON/V<cr>
  !     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-03AB<tab><tab>20-MAR-79<tab>FIX FLAGGING OF INDEX VOLUMES.<esc>*V<cr>
  !     6C-03AB         20-MAR-79       FIX FLAGGING OF INDEX VOLUMES.
*H/1010<tab>/V<cr>
1010    I$="V06C-03A"
*G/03A/I/B/V<cr>
1010    I$="V06C-03AB"
*H/14070<tab>/V<cr>
14070   IF D%=1% THEN
*G/11%/V<cr>
        \       T$=T$+"Volume Sequence # : "+FNN$(Z0%(P0%,11%))
*AKI<cr>
<tab>\<tab>Z%=(Z0%(P0%,23%)<>0% AND 1%)+(Z0%(P0%,25%)<>0% AND 2%)<lf>
<tab><tab><tab>AND (Z0%(P0%,30%) AND 16384%)<>0%<lf>
<tab>\<tab>T$=T$+"(Pri Index)" IF Z%=1%<lf>
<tab>\<tab>T$=T$+"(Sec Index)" IF Z%=2%<lf>
<tab>\<tab>T$=T$+"(Index)" IF Z%=3%<lf>
<esc>*V<cr>
        \       T$=T$+SPACE$(35%+D0%-LEN(T$))+"Owner : "+
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD BACLST<cr>

Ready

COMPILE $BACLST<cr>

Ready

RUN $PIP<cr>
*=$BACLST.BAC<232>/RE<cr>
*^Z

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E VØ6C-Ø3
Backup Package
BACKTO

Seq 13.15.6 M

BACKTO ABORTS ON END-OF-TAPE UNDER SPECIAL CIRCUMSTANCES - MANDATORY BACKTO PATCH

PROBLEM:

BACKTO will abort with a fatal error message if it encounters an end-of-tape mark while writing the last end-of-file mark just before chaining to BACDMP.

SOLUTION:

The patching procedure detailed below will cause BACKTO to recover and pass control to BACDMP under the conditions described above.

NOTE

> The mandatory BACDMP patch described in article Seq 13.6.1 M and the mandatory BACLST patch described in Seq 13.12.3 M, both published in this issue, must be installed along with this patch to completely solve the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - BACKTO.BAS=BACKTO.BAS<cr>
#[logfile=]<cr>
*H/EDIT/G/3ABCD/I/E/V<cr>
 !                EDIT          : Ø3ABCDE
*H/DATE/G/19-JAN-79/-9C/2Ø-MAR-79/V<cr>
 !                EDIT DATE     : 2Ø-MAR-79
*H/2Ø/G/REASON/V<cr>
  !     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-Ø3ABCDE<tab>2Ø-MAR-79<tab>TRAP END-OF-TAPE WHILE WRITING EOF.<esc>*V<cr>
```

```
  !     6C-03ABCDE      20-MAR-79       TRAP END-OF-TAPE WHILE WRITING EOF.
*H/1010<tab>/V<cr>
1010     I$="BACKTO      V06C-03ABCD"
*G/03ABCD/I/E/V<cr>
1010     I$="BACKTO      V06C-03ABCDE"
*H/10490<tab>/V<cr>
10490    D8%=D8% OR (A9% AND 12288%)
*G/Z%=MAGTAPE/V<cr>
         \ Z%=MAGTAPE(2%,0%,6%) IF M%<>0% UNLESS T9% OR (Z0%(C1%,30%) AND 1024%)=0%
*AV<cr>
         \ Z%=MAGTAPE(3%,0%,6%) IF M%<>0% UNLESS
*3DI<cr>
<cr>
10495<tab><esc>*V<cr>
10495    Z%=MAGTAPE(3%,0%,6%) IF M%<>0% UNLESS
*H/19020<tab>/V<cr>
19020    E%=ERR IF E%=0%
*AI<cr>
<tab>\ RESUME 10495 IF ERL=10490%<lf>
<esc>*V<cr>
         \ T$=RIGHT(SYS(CHR$(6%)+CHR$(9%)+CHR$(E% AND 63%)),4%)
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD BACKTO<cr>

Ready

COMPILE $BACKTO<cr>

Ready

RUN $PIP<cr>
*=$BACKTO.BAC<232>/RE<cr>
*^Z

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E VØ6C-Ø3
Backup Package
BACKTO

Seq 13.15.7 M

CHANGE TO THE DATA UNRELIABLE WARNING MESSAGE - MANDATORY BACKTO PATCH

PROBLEM:

Upon opening a file to be backed up, BACKTO checks to see if it is granted write access to the file. This is to determine if any other job might have this privilege and therefore might modify the file while it is being backed up. If BACKTO finds that it does not have write access (and therefore another job might have) it prints the following warning message:

"DATA UNRELIABLE - FILE OPENED BY ANOTHER USER IN FILE <filename>"

This message, however, is not true in all cases as write access might be denied due to the file's protection code.

SOLUTION:

The patching procedure detailed below will change the above DATA UNRELIABLE message to read:

"DATA UNRELIABLE - CANNOT GAIN WRITE ACCESS IN FILE <filename>"

This new warning message is true in all cases that it is printed. In many cases when this message is printed the file has in fact been opened by another user (who has the write access) and therefore could be changing the data in the file as it is being backed up. In the cases where write access is denied due to the file's protection code, it is not possible for BACKTO to determine if, at any point during the transfer of the file, the file is opened by a job which has write access.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - BACKTO.BAS=BACKTO.BAS<cr>
#[logfile=]<cr>
```

```
*H/EDIT/G/03ABCDE/I/F/V<cr>
  !                EDIT            : 03ABCDEF
*H/DATE/G/20-MAR-79/-9C/23-MAR-79/V<cr>
  !                EDIT DATE       : 23-MAR-79
*H/20/G/REASON/V<cr>
  !     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6C-03ABCDEF<tab>23-MAR-79<tab>CHANGE DATA UNRELIABLE MESSAGE.<esc>*V<cr>
  !     6C-03ABCDEF     23-MAR-79       CHANGE DATA UNRELIABLE MESSAGE.
*H/1010<tab>/V<cr>
1010    I$="BACKTO      V06C-03ABCDE"
*G/03ABCDE/I/F/V<cr>
1010    I$="BACKTO      V06C-03ABCDEF"
*H/25100<tab>/V<cr>
25100   DEF FNE$(E%,D%,P3%,P0%,E1%)
*G/UNRELIABLE - /27DI/CANNOT GAIN WRITE ACCESS/V<cr>
                Z$="DATA UNRELIABLE - CANNOT GAIN WRITE ACCESS" IF
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD BACKTO<cr>

Ready

COMPILE $BACKTO<cr>

Ready

RUN $PIP<cr>
*=$BACKTO.BAC<232>/RE<cr>
*^Z

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E VØ6C-Ø3
Spooling and Operator Services Package
QUE

Seq 14.4.9 O

DISABLE OPERATOR QUEING TO OTHER USER'S ACCOUNT - OPTIONAL QUE PATCH

PROBLEM:

Operators, as defined in OPSER's table of valid operators, can QUE files to be printed or jobs to be run under BATCH for another user. Some installations may consider this too great a security risk.

SOLUTION:

The following patch disables the above mentioned feature. It does not affect the operator's ability to modify or kill other user jobs once they are in the queue, as that poses no apparent threat to system security. Nor does it affect a privileged user's ability to que files/jobs for an other account.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. To apply the patch, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - QUE.BAS=QUE.BAS<cr>
#[logfile=]<cr>
*H/2Ø15<tab>/V<cr>
2Ø15    IF P8%<>1% AND NOT FNV%(SWAP%(P9%)+P8%) AND
*G/AND/29DV<cr>
2Ø15    IF P8%<>1% AND
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD QUE<cr>

Ready

COMPILE $QUE<cr>

Ready

RUN $PIP<cr>
*=$QUE.BAC<232>/RE<cr>
*^Z

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RSTS/E VØ6C-Ø3
Spooling and Operator Services Package
QUMRUN

Seq 14.6.5 0

DISABLE OPERATOR QUEING TO OTHER USER'S ACCOUNT - OPTIONAL QUMRUN PATCH

PROBLEM:

Operators, as defined in OPSER's table of valid operators, can QUE files to be printed or jobs to be run under BATCH for another user. Some installations may consider this too great a security risk.

SOLUTION:

The following patch disables the above mentioned feature. It does not affect the operator's ability to modify or kill other user jobs once they are in the queue, as that poses no apparent threat to system security. Nor does it affect a privileged user's ability to que files/jobs for another account.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. To apply the patch, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - QUMRUN.BAS=QUMRUN.BAS<cr>
#[logfile=]<cr>
*H/10070<tab>/V<cr>
10070    IF CVT$%(MID(M$,16%,2%))=0% THEN
*4AV<cr>
                          E%=-1% UNLESS VALID.OP%
*G/UNLESS /I/(P% AND 255%)=1% OR (/G/VALID.OP%/I/ AND T%<>6%)/V<cr>
                          E%=-1% UNLESS (P% AND 255%)=1% OR (VALID.OP% AND T%<>6%)
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD QUMRUN<cr>

Ready

COMPILE $QUMRUN<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

DMS-500 V2
for RSTS/E V6C
DMSUTL V02-03

Seq 24.2.4 M

REORGANIZING ISAM FILES CHANGES PROTECTION - MANDATORY DMSUTL PATCH (GH)

PROBLEM:

When a DMS-500 ISAM file is reorganized using the utility program DMSUTL, the protection code specified for the file is lost.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMSUTL source files are located on the public disk structure. In the patching procedure, we will, therefore, refer to those files by their simplest form: DMSUTL.BAS and DMSUTL.CHS. If the files are not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSUTL.BAS=DMSUTL.BAS
#[logfile=]
*H/DMSUTL/V<cr>
1!!!!!<tab>DMSUTL<tab><tab>Version 2<tab>Edit 03<tab><tab>77/10<lf>
*G/03/-C/4/G.77/10.-4C.9/03.V<cr>
1!!!!<tab>DMSUTL<tab><tab>Version 2<tab>Edit 04<tab><tab>79/03<lf>
*G/1976/V<cr>
!!!!!<tab>Copyright (C) 1975,1976,1977,<lf>
*-C/7/G/77/-C/9/V<cr>
!!!!!<tab>Copyright (C) 1975,1977,1979,<lf>
*H/V02-03/V<cr>
<tab>PRINT "DMS-500 Utility Program<tab>V02-03" \<lf>
*-C/4/V<cr>
<tab>PRINT "DMS-500 Utility Program<tab>V02-04" \<lf>
*H/420<tab>/V<cr>
420<tab>F2%=1% \<lf>
```

```
*2AI<cr>
425<tab>X%=INSTR(1%,F2$,"<") \<lf>
<tab>IF X% THEN P%=VAL(MID(F2$,X%+1%,LEN(F2$)-X%-1%)) ELSE<lf>
<tab><tab>P%=SWAP%(CVT$%(Q9$(14%))) \<lf>
<tab><tab>F2$=F2$+"<"+NUM1$(P%)+">"<cr>
<esc>*V<cr>
430<tab>F1%=FNF% \ X%=INSTR(1%,F2$,".") \<lf>
*H/3010<tab>/V<cr>
3010<tab>LSET Q1$=Q2$ \ GET #F2%, RECORD 1% UNLESS F2$="KB:" \<lf>
*G/\ /KDV<cr>
3010<tab>LSET Q1$=Q2$ \ Q%=F1% \ GOSUB 21900 \<lf>
*AI<cr>
<tab>LSET Q9$(14%)=CVT%$(SWAP%(P%)) \<lf>
<esc>*V<cr>
<tab>LSET Q9$(25%)=Q9$(0%) \<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile this program and re-enter it in the system library, type the following RSTS/E commands.

```
OLD $DMSFSS

Ready

APPEND $DMSISO

Ready

APPEND $DMSRAO

Ready

REPLACE DMS500

Ready

OLD DMSUTL.BAS

Ready

APPEND DMS500

Ready

COMPILE $DMSUTL<40>

Ready

UNSAVE DMS500

Ready
```

4. Now apply the same patch to the other part of the utility: DMSUTL.CHS. Note that if you specified a file for [logfile=], you can use that same file as a patch command file as illustrated below.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSUTL.CHS=DMSUTL.CHS
#[=logfile]
*<Same patch applied here>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

5. This part of the utility is re-compiled as follows:

```
OLD DMSUTL.CHS

Ready

APPEND $DMSRAO

Ready

COMPILE $DMSUTL.CHC<40>

Ready
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this program.

DMS-500 V2
for RSTS/E V6C
DMSFSS V02

DMS-500 ACCESS TO DIBOL ISAM FILES - OPTIONAL DMSFSS PATCH (GH)

PROBLEM:

ISAM files that are created using the DIBOL ISAM Utility ISMUTL can not be accessed by DMS-500 functions, even though you follow the guidelines given to assure compatibility.

SOLUTION:

The optional patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSFSS.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSFSS.BAS=$DMSFSS.BAS
#[logfile=]
*H/21220<tab>/V<cr>
21220<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*-JI<cr>
<tab>FIELD #Q%, 508% AS Q1$, 1% AS Q1$, 1% AS Q2$, 2% AS Q3$ \<lf>
<tab>LSET Q2$=CHR$(1%+( Q%(Q%,12%)=0% )) \ LSET Q3$=CVT%$(SWAP%(2%)) \<lf>
<esc>*V<cr>
<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSFSS.BAS

Ready

REPLACE $DMSFSS.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V6C
DMSISR V02

Seq 24.4.3 O

1 of 2

DMS-500 ACCESS TO DIBOL ISAM FILES - OPTIONAL DMSISR PATCH (GH)

PROBLEM:

ISAM files that are created using the DIBOL ISAM Utility ISMUTL can not be accessed by DMS-500 functions, even though you follow the guidelines given to assure compatibility.

SOLUTION:

The optional patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSISR.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSISR.BAS=$DMSISR.BAS
#[logfile=]
*H/21220<tab>/V<cr>
21220<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*-JI<cr>
<tab>FIELD #Q%, 508% AS Q1$, 1% AS Q1$, 1% AS Q2$, 2% AS Q3$ \<lf>
<tab>LSET Q2$=CHR$(1%+( Q%(Q%,12%)=0% )) \ LSET Q3$=CVT%$(SWAP%(2%)) \<lf>
<esc>*V<cr>
<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSISR.BAS

Ready

REPLACE $DMSISR.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V6C
DMSISC V02-02

Seq 24.5.1 M

1 of 2

CORE RESIDENT INDEX LOCKS FILE - MANDATORY DMSISC PATCH (GH)

PROBLEM:

If you use the Core Resident Index module DMSISC and you open a DMS-500 ISAM file for Update, Random, that file will be locked against any other program accessing it randomly.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSISC.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSISC.BAS=$DMSISC.BAS
#[logfile=]
*H/EDIT 02/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 02<tab><tab>76/03/29<lf>
*-C/3/3J7C.9/03.V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 03<tab><tab>79/03<lf>
*G/1976/V<cr>
!!!!!!<tab>Copyright (C) 1975,1976,<lf>
*I/,1979/V<cr>
!!!!!!<tab>Copyright (C) 1975,1976,1979,<lf>
*H/21215<tab>/V<cr>
21215<tab>IF Q%(Q%,12%) THEN<lf>
```

DMS-500 V2
for RSTS/E V6C
DMSISC V02-02

Seq 24.5.1 M

2 of 2

```
*AV<cr>
<tab>GET #Q%, RECORD Q%(Q%,13%) \ FIELD #Q%, 512% AS Q9$ \<lf>
*G//I<cr>
<lf>
<tab>UNLOCK #Q% \<esc>*V<cr>
<tab>UNLOCK #Q% \ FIELD #Q%, 512% AS Q9$ \<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSISC.BAS

Ready

REPLACE $DMSISC.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V6C
DMSRAR V02

Seq 24.6.2 0

DMS-500 ACCESS TO DIBOL ISAM FILES - OPTIONAL DMSRAR PATCH (GH)

PROBLEM:

ISAM files that are created using the DIBOL ISAM Utility ISMUTL can not be accessed by DMS-500 functions, even though you follow the guidelines given to assure compatibility.

SOLUTION:

The optional patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSRAR.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSRAR.BAS=$DMSRAR.BAS
#[logfile=]
*H/21220<tab>/V<cr>
21220<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*-JI<cr>
<tab>FIELD #Q%, 508% AS Q1$, 1% AS Q1$, 1% AS Q2$, 2% AS Q3$ \<lf>
<tab>LSET Q2$=CHR$(1%+( Q%(Q%,12%)=0% )) \ LSET Q3$=CVT%$(SWAP%(2%)) \<lf>
<esc>*V<cr>
<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSRAR.BAS

Ready

REPLACE $DMSRAR.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V6C
DMSISA V02

DMS-500 ACCESS TO DIBOL ISAM FILES - OPTIONAL DMSISA PATCH (GH)

PROBLEM:

ISAM files that are created using the DIBOL ISAM Utility ISMUTL can not be accessed by DMS-500 functions, even though you follow the guidelines given to assure compatibility.

SOLUTION:

The optional patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSISA.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSISA.BAS=$DMSISA.BAS
#[logfile=]
*H/21220<tab>/V<cr>
21220<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*-JI<cr>
<tab>FIELD #Q%, 508% AS Q1$, 1% AS Q1$, 1% AS Q2$, 2% AS Q3$ \<lf>
<tab>LSET Q2$=CHR$(1%+( Q%(Q%,12%)=0% )) \ LSET Q3$=CVT%$(SWAP%(2%)) \<lf>
<esc>*V<cr>
<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSISA.BAS

Ready

REPLACE $DMSISA.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V6C
DMSISA V02-04

Seq 24.7.4 M

INCORRECT RECORD LOCK DURING ADD - MANDATORY DMSISA PATCH (GH)

PROBLEM:

If adding a record to a DMS-500 ISAM file fails because of "Duplicate key not allowed," error 13, the block incorrectly remains locked.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSISA.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSISA.BAS=$DMSISA.BAS
#[logfile=]
*H/EDIT 04/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 04<tab><tab>77/10<lf>
*-C/5/3J4C.9/03.V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 05<tab><tab>79/03<lf>
*G/1976/V<cr>
!!!!!!<tab>Copyright (C) 1975,1976,1977,<lf>
*-C/7/G/1977/-C/9/V<cr>
!!!!!!<tab>Copyright (C) 1975,1977,1979,<lf>
*H/21330<tab>/V<cr>
21330<tab>Q$=MID(Q5$,Q%(Q%,9%),Q%(Q%,8%)) \ GOSUB 21225 \<lf>
```

```
*2AV<cr>
<tab>IF Q%(Q%,10%)<0% GOTO 21340 ELSE IF Q%(Q%,10%)=0% GOTO 21988<cr>
*G/ELSE/C<cr>
<lf>
<tab><esc>*G/=0%/I/ THEN GOSUB 21465 \/V<cr>
<tab>IF Q%(Q%,10%)=0% THEN GOSUB 21465 \ GOTO 21988<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSISA.BAS

Ready

REPLACE $DMSISA.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V6C
DMSRAA V02

DMS-500 ACCESS TO DIBOL ISAM FILES - OPTIONAL DMSRAA PATCH (GH)

PROBLEM:

ISAM files that are created using the DIBOL ISAM Utility ISMUTL can not be accessed by DMS-500 functions, even though you follow the guidelines given to assure compatibility.

SOLUTION:

The optional patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSRAA.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSRAA.BAS=$DMSRAA.BAS
#[logfile=]
*H/21220<tab>/V<cr>
21220<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*-JI<cr>
<tab>FIELD #Q%, 508% AS Q1$, 1% AS Q1$, 1% AS Q2$, 2% AS Q3$ \<lf>
<tab>LSET Q2$=CHR$(1%+( Q%(Q%,12%)=0% )) \ LSET Q3$=CVT%$(SWAP%(2%)) \<lf>
<esc>*V<cr>
<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSRAA.BAS

Ready

REPLACE $DMSRAA.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V6C
DMSISO V02-03

Seq 24.10.2 M

EXTEND MODE DESTROYS OVERFLOW AREA - MANDATORY DMSISO PATCH (GH)

PROBLEM:

Using "Extend Mode" with DMS-500 ISAM files (by appending DMSFSX to DMSISO) will cause the Overflow Area of the file to be destroyed.

SOLUTION:

The patch detailed below will correct the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSISO.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSISO.BAS=$DMSISO.BAS
#[logfile=]
*H/03/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 03<tab><tab>77/10<lf>
*-C/4/G.77/10.-4C.9/03.V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 04<tab><tab>79/03<lf>
*G/1976/V<cr>
!!!!!!<tab>Copyright (C) 1975,1976,1977,<lf>
*-C/7/G/77/-C/9/V<cr>
!!!!!!<tab>Copyright (C) 1975,1977,1979,<lf>
*H/21710<tab>/V<cr>
21710<tab>IF Q%(Q%,12%)<=1% THEN GOSUB 21450 \ ON ERROR GOTO 21950 \<lf>
```

```
*AL<cr>
<tab>LSET Q9$(8%)=CVT%$(SWAP%(Q%(Q%,13%))) \ LSET Q9$(11%)=CVT%$(0%) \<1f>
*G/\/26DV<cr>
<tab>LSET Q9$(8%)=CVT%$(SWAP%(Q%(Q%,13%))) \<1f>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSISO.BAS

Ready

REPLACE $DMSISO.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V6C
DMSISO V02-04

Seq 24.10.3 M

OUTPUT MODE DOES NOT SET RECORD COUNT CORRECTLY - MANDATORY DMSISO PATCH (GH)

PROBLEM:

If you use the Output Mode functions (DMSISO) with a DMS-500 ISAM file, the record count will not be set correctly when you are finished. (Also, there are some unnecessary lines included in the DMSISO module.)

SOLUTION:

The patch detailed below will correct the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSISO.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSISO.BAS=$DMSISO.BAS
#[logfile=]
*H/04/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 04<tab><tab>79/03<lf>
*-C/5/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 05<tab><tab>79/03<lf>
*H/21200<tab>/V<cr>
21200<tab>Q2%=ASCII(Q9$(16%)) \ Q4%=Q%(Q%,11%) \<lf>
*0A11KV<cr>
*H/21560<tab>/V<cr>
21560<tab>Q%(Q%,4%),Q%(Q%,5%)=ASCII(Q9$(10%))-ASCII(Q9$(13%)) \<lf>
```

```
*4AI<cr>
21603<tab>Q8(Q%)=-Q9 \ Q9=0.<cr>
<esc>*V<cr>
21605<tab>Q%(Q%,1%)=Q0% \ Q%=Q%+Q2%+1% \ GOTO 21998<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSISO.BAS

Ready

REPLACE $DMSISO.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V6C
DMSFSX V02-03

OUTPUT MODE DOES NOT SET RECORD COUNT CORRECTLY - MANDATORY DMSFSX PATCH (GH)

PROBLEM:

If you use the Output Mode functions (DMSISO) with a DMS-500 ISAM file, the record count will not be set correctly when you are finished. When the patch detailed in Article Seq. 24.10.3 is installed in DMSISO, however, the Extend Mode function implemented by appending DMSFSX will no longer set the record count properly.

SOLUTION:

The patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DMS-500 package is located in the System Library. In the patching procedure, we will, therefore, refer to the file by the form: $DMSFSX.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DMSFSX.BAS=$DMSFSX.BAS
#[logfile=]
*H/03/V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 03<tab><tab>77/01<lf>
*-C/4/G.77/01.-4C.9/03.V<cr>
21000!<tab>DMS-500<tab><tab>VERSION 2<tab>EDIT 04<tab><tab>79/03<lf>
*G/1976/V<cr>
!!!!!!<tab>Copyright (C) 1975,1976,1977,<lf>
*-C/7/G/77/-C/9/V<cr>
!!!!!!<tab>Copyright (C) 1975,1977,1979,<lf>
*H/21600<tab>/V<cr>
21600<tab>LSET Q0$=""  IF Q%(Q%,12%)=0% THEN Q%(Q%,3%)=Q3% ELSE<lf>
```

```
*3AI<cr>
21602<tab>GOTO 21605<cr>
<esc>*V<cr>
32767<tab>END<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To replace this DMS-500 module in the system library, type the following RSTS/E commands.

```
OLD DMSFSX.BAS

Ready

REPLACE $DMSFSX.BAS<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this module.

DMS-500 V2
for RSTS/E V6C
DSORTX V08-02

Seq 24.22.2 M

CORE COMMON CORRECTION - MANDATORY DSORTX PATCH (FH)

PROBLEM:

DSORTS cannot find DSORTM because core common gets rearranged incorrectly.

SOLUTION:

The patch detailed below will correct the problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the DSORTX source file is located on the public disk structure. In the patching procedure, we will, therefore, refer to that file by its simplest form: DSORTX.BAS. If the file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - DSORTX.BAS=DSORTX.BAS
#[logfile=]
*H.EDIT 02.V<cr>
1!!!!!<tab>DSORTX<tab><tab>VERSION 08<tab>EDIT 02<tab><tab>77/01<cr>
*-C.3.G.77/01.-5C.79/02.V<cr>
1!!!!!<tab>DSORTX<tab><tab>VERSION 08<tab>EDIT 03<tab><tab>79/02<cr>
*H.1972,.V<cr>
!!!!!<tab>Copyright (C) 1972,73,74,75,76,77,<1f>
*12D3JI.79,.V<cr>
!!!!!<tab>Copyright (C) 1972,77,79,<1f>
*H.V08-02.V<cr>
150<tab>PRINT " DSORTX V08-02"; IF T7%<1f>
*-C.3.V<cr>
150<tab>PRINT " DSORTX V08-03"; IF T7%<1f>
*H.30010<tab>H.V<cr>
30010<tab>H%=H%+100% IF T7% :<1f>
```

DMS-500 V2
   for RSTS/E V6C
DSORTX V08-02

Seq 24.22.2 M

2 of 2

```
*2AL<cr>
<tab>V1$=V1$+CHR$(C1%)+CHR$(Z9%)+CHR$(H%)+A8$+STRING$(3%,0%) :<lf>
*G.+CHR$(H%)+.I.CHR$(0%)+.G.STRING$(3.-C.2.V<cr>
<tab>V1$=V1$+CHR$(C1%)+CHR$(Z9%)+CHR$(H%)+CHR$(0%)+A8$+STRING$(2%,0%) :<lf>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile this program and re-enter it in the system library, type the following RSTS/E commands.

```
OLD DSORTX.BAS

Ready

COMPILE $DSORTX<40>

Ready
```

4. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of this program.

RSTS/E 278Ø PACKAGE
for RSTS/E VØ6C-Ø3
RJ278Ø

LOCAL BINARY TRANSMIT FAILURE - MANDATORY RJ278Ø PATCH

NOTE

RJ278Ø.BAS as released with RSTS/E VØ6B is used on all VØ6B and later versions of RSTS/E. For this reason, the edit level of the program remains at "VØ6B-Ø3".

PROBLEM:

If the default transmit command is 278Ø or GEN, it should be possible to send, as part of a multiple file transfer, a file or files in binary mode. This is done by using the "/B" switch to override the transmit command for those files which should be sent untranslated. Currently, the mode of the first file of a multiple file transfer controls the mode for the complete transfer.

SOLUTION:

The patching procedure detailed below will correct this problem.

NOTE

The mandatory 278Ø Device Driver patch described in article Seq 5.1.9 M, published in this issue, must be installed along with this patch.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RJ278Ø.BAS=RJ278Ø.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            :       Ø3A
*G/Ø3A/I/B/V<cr>
6!              EDIT            :       Ø3AB
```

RSTS/E 278Ø PACKAGE
   for RSTS/E VØ6C-Ø3
RJ278Ø


```
*H/7!/V<cr>
7!              EDIT DATE       :       Ø6-JUL-77
*G/Ø6-JUL-77/-9C/23-MAR-79/V<cr>
7!              EDIT DATE       :       23-MAR-79
*H/21!/G/REASON/V<cr>
21!     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6B-Ø3AB<tab><tab>23-MAR-79<tab>FIX LOCAL BINARY PROBLEM.<esc>*V<cr>
  !     6B-Ø3AB         23-MAR-79       FIX LOCAL BINARY PROBLEM.
*H/1Ø1Ø<tab>/V<cr>
1Ø1Ø    I$="VØ6B-Ø3A"
*G/Ø3A/I/B/V<cr>
1Ø1Ø    I$="VØ6B-Ø3AB"
*H/4Ø1Ø<tab>/V<cr>
4Ø1Ø    FIELD #1%, 134% AS B1$
*1ØAV<cr>
                ! FIELD THE RJ: BUFFER.
*I<cr>
<tab>\ PUTBIN%=NEWBIN%<lf>
<esc>*V<cr>
                ! FIELD THE RJ: BUFFER.
*H/413Ø<tab>/V<cr>
413Ø    F$=LEFT(CHR$(27%)+F$,MAXLEN%) IF X.TEST% AND 128%
*8AV<cr>
        \  RETURN
*I<cr>
<tab>\ PUTBIN%=NEWBIN%<lf>
<esc>*V<cr>
        \  RETURN
*H/423Ø<tab>/V<cr>
423Ø    E%,E2%=Ø%
*3AV<cr>
        \ PUTBIN%=(R% OR (B1% AND B2%)) AND 1%
*G/PUTBIN/-6C/NEWBIN/V<cr>
        \ NEWBIN%=(R% OR (B1% AND B2%)) AND 1%
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD RJ278Ø<cr>

Ready

COMPILE $RJ278Ø<cr>

Ready
```

RSTS/E 278Ø PACKAGE
for RSTS/E VØ6C-Ø3
RJ278Ø

LOCAL BINARY TRANSMIT FAILURE - MANDATORY RJ278Ø PATCH

NOTE

RJ278Ø.BAS as released with RSTS/E VØ6B is used on all VØ6B and later versions of RSTS/E. For this reason, the edit level of the program remains at "VØ6B-Ø3".

PROBLEM:

If the default transmit command is 278Ø or GEN, it should be possible to send, as part of a multiple file transfer, a file or files in binary mode. This is done by using the "/B" switch to override the transmit command for those files which should be sent untranslated. Currently, the mode of the first file of a multiple file transfer controls the mode for the complete transfer.

SOLUTION:

The patching procedure detailed below will correct this problem.

NOTE

The mandatory 278Ø Device Driver patch described in article Seq 5.1.9 M, published in this issue, must be installed along with this patch.

PROCEDURE:

1. For purposes of the discussion, we will assume that the required program to be patched is located on the public disk structure. In the patching procedure, we will refer to the program by its most simple name format: <program name>.BAS. The person performing the patching operation should, if necessary, replace all program references with suitable text according to the requirements of the installation.

   Also, for purposes of presenting the patching procedure, we assume that the patching operation will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have this distribution you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RJ278Ø.BAS=RJ278Ø.BAS<cr>
#[logfile=]<cr>
*H/6!/V<cr>
6!              EDIT            :       Ø3A
*G/Ø3A/I/B/V<cr>
6!              EDIT            :       Ø3AB
```

```
*H/7!/V<cr>
7!              EDIT DATE       :       Ø6-JUL-77
*G/Ø6-JUL-77/-9C/23-MAR-79/V<cr>
7!              EDIT DATE       :       23-MAR-79
*H/21!/G/REASON/V<cr>
21!     VER/ED          EDIT DATE       REASON
*I<cr>
<lf>
  !<tab>6B-Ø3AB<tab><tab>23-MAR-79<tab>FIX LOCAL BINARY PROBLEM.<esc>*V<cr>
  !     6B-Ø3AB         23-MAR-79       FIX LOCAL BINARY PROBLEM.
*H/1Ø1Ø<tab>/V<cr>
1Ø1Ø    I$="VØ6B-Ø3A"
*G/Ø3A/I/B/V<cr>
1Ø1Ø    I$="VØ6B-Ø3AB"
*H/4Ø1Ø<tab>/V<cr>
4Ø1Ø    FIELD #1%, 134% AS B1$
*1ØAV<cr>
                ! FIELD THE RJ: BUFFER.
*I<cr>
<tab>\ PUTBIN%=NEWBIN%<lf>
<esc>*V<cr>
                ! FIELD THE RJ: BUFFER.
*H/413Ø<tab>/V<cr>
413Ø    F$=LEFT(CHR$(27%)+F$,MAXLEN%) IF X.TEST% AND 128%
*8AV<cr>
        \  RETURN
*I<cr>
<tab>\ PUTBIN%=NEWBIN%<lf>
<esc>*V<cr>
        \  RETURN
*H/423Ø<tab>/V<cr>
423Ø    E%,E2%=Ø%
*3AV<cr>
        \ PUTBIN%=(R% OR (B1% AND B2%)) AND 1%
*G/PUTBIN/-6C/NEWBIN/V<cr>
        \ NEWBIN%=(R% OR (B1% AND B2%)) AND 1%
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. To re-compile the program and re-enter it into the system library, type the following RSTS/E commands.

```
OLD RJ278Ø<cr>

Ready

COMPILE $RJ278Ø<cr>

Ready
```

4. The person making the changes to the program should now take whatever steps are necessary, according to installation guidelines, to save the new version of the program.

5. The source (.BAS) version of the program should now be removed from the public structure by using either the UNSAVE or the KILL commands of RSTS/E.

RPG II V8.02
for RSTS/E V6C
OTS V8.02T

Seq 32.3.20 M

UNPACKING PACKED ARRAY AT OUTPUT TIME - MANDATORY OTS PATCH (YL)

PROBLEM:

If all or a part of an input packed array is written out as an unpacked field, the content of the array is erroneously modified and the result is unpredictable.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library file RPGLIB.OLB is located on the public disk structure in the system library account ($). If this file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: RARIN.COR

```
        .TITLE  R.ARIN
        .IDENT  /V8.00/ ;5-MAR-79 YL
        TC=%4
        LK=%5
; *** THIS IS A TEMPORARY PATCH TO BYPASS RPG COMPILER BUG. ***
; *** NAMELY, THIS MODULE SHOULD NOT BE CALLED IF THE ARRAY ***
; *** IS A PACKED NUMERIC ARRAY.                            ***
$$BASE=.
.       =$$BASE
        JSR     PC,$$BASE+26
.       =$$BASE+26
        JSR     LK,R.ARSU       ;ARRAY RETRIEVE/UPDATE SET UP
        MOV     @-6(TC),-(SP)   ;FIRST WORD OF ACB
        BIC     #147777,(SP)    ;ISOLATE NF FIELD
        CMP     (SP)+,#20000    ;PACKED NUMERIC ARRAY?
        BNE     10$             ;NO
        TST     (SP)+           ;POP RETURN ADDR
        JMP     R.EXIT
10$:    RTS     PC
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>RARIN.PAT=RARIN.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>RARIN.OLD=$RPGLIB/EX:R.ARIN
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>RARIN=RARIN.OLD/CS:017044,RARIN.PAT/CS:016047
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGLIB/RP=RARIN
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02
for RSTS/E V6C
OTS V8.02T

Seq 32.3.21 M

RPGASN ALLOWS ONLY 84 ENTRIES - MANDATORY OTS PATCH (YL)

PROBLEM:

RPGASN.TSK only allows a maximum of 84 entries in the RPGASN.DAT file.

SOLUTION:

The patch detailed below increases the maximum number of entries to 252.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library file RPGLIB.OLB is located on the public disk structure in the system library account ($). If this file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXDTT.COR

```
        .TITLE  XXDTT - RPGASN AUXILIARY DATA
        .IDENT  /V2.03/ ;20-MAR-79 YL
$$BASE=.
.       =$$BASE+1600
        T.TBL:: .BLKW   3000
        T.BFR:: .BLKW   6000
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXDTT.PAT=XXDTT.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXDTT.OLD=$RPGLIB/EX:XXDTT
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXDTT=XXDTT.OLD/CS:042404,XXDTT.PAT/CS:006436
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGLIB/RP=XXDTT
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build the RPGASN.TSK file, after installing all published patches, as described in Section C.4 of the CTS-500 RPG II REPORT PROGRAM GENERATOR USER'S GUIDE.

RPG II V8.02
for RSTS/E V6C
OTS V8.02T

Seq 32.3.22 M

RANDOM ACCESS TO SEQUENTIAL FILES - MANDATORY OTS PATCH (YL)

PROBLEM:

Random access to a sequential file (using the CHAIN operation) produces the next sequential record instead of the record specified.

SOLUTION:

The patches detailed below will correct the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library files (RPGLIB.OLB and RPGCOM.OLB) and the RPG ODL files (RPG0.ODL, RPG1.ODL, RPG2.ODL) are located on the public disk structure in the system library account ($). If these files are not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. First correct the RPG ODL files using the RSTS/E patching program, CPATCH. You should substitute a file name for the [logfile=] in the procedure below, since the same patch is to be applied to all three ODL files.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - RPG0.ODL=$RPG0.ODL
#[logfile=]
*H/RMSREC:/G/RM0X26/0L<cr>
RMSREC:<tab>.FCTR<tab>RMSRAB-(RMSCDX,RMSSQ0,RM0X26*I/,RMSBLK/0L<cr>
RMSREC:<tab>.FCTR<tab>RMSRAB-(RMSCDX,RMSSQ0,RM0X26,RMSBLK*H/;RMSBLK/V<cr>
;RMSBLK:<tab>.FCTR<tab>RMSBMC-RMMISC<cr>
*0ADV<cr>
RMSBLK:<tab>.FCTR<tab>RMSBMC-RMMISC<cr>
*2ADV<cr>
RMMISC:<tab>.FCTR<tab>RMSMIS-RMMIS0<cr>
*ADV<cr>
RMMIS0:<tab>.FCTR<tab>[1,1]RMSLIB/LB:R0FREE:R1TRUN-RMMIS1<cr>
*ADV<cr>
RMMIS1:<tab>.FCTR<tab>[1,1]RMSLIB/LB:R0RWIN:R2CALC-RMWATR-RMMAGT<cr>
```

```
*ADV<cr>
RMWATR:<tab>.FCTR<tab>[1,1]RMSLIB/LB:R0WATR-RMR1WL-RMR1RL-RMEXTD<cr>
*ADV<cr>
RMMAGT:<tab>.FCTR<tab>[1,1]RMSLIB/LB:R0MAGT<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

2. Now apply the same patch to the other ODL files: RPG1.ODL and RPG2.ODL. Note that if you specified a file for [logfile=], you can use that same file as a patch command file as illustrated below.

```
RUN $CPATCH
<CPATCH's header line>

File to patch - RPG1.ODL=$RPG1.ODL
#[=logfile]
*<Same patch applied here>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - RPG2.ODL=$RPG2.ODL
#[=logfile]
*<Same patch applied here>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. Now re-install the three RPG ODL files into the system library as follows.

```
RUN $PIP.SAV
*$<40>=RPG0.ODL,RPG1.ODL,RPG2.ODL
*^Z

Ready
```

4a. Build the following source file using an editor and name it: XXORG.MAC

```
        .TITLE  XXORG
        .IDENT  /V8.02/ ;30-JAN-79 YL
        .MCALL  ORG$
$XXORG::ORG$    SEQ,<CRE,FIN,GET,PUT,UPD>
        ORG$    REL,<CRE,FIN,GET,PUT,UPD>
        .END
```

4b. Build the following correction file using an editor and name it: XXRDM.COR

```
            .TITLE  XXRDM -- RPG RANDOM FILE I/O
            .IDENT  /V8.02/ ;30-JAN-79 YL
            CB=%2
            F.RECN=104
      $$BASE=.
      .     =$$BASE+246
            NOP
            NOP
            NOP
            JSR     PC,PATCH                ;FIND THE RECORD
      .     =$$BASE+1036
      PATCH: JSR    PC,RMSRWD               ;REWIND
            BCS     PATCH                   ;
            MOV     F.RECN(CB),-(SP)        ;SET COUNT
            MOV     F.RECN+2(CB),-(SP)      ;
      20$:  JSR     PC,RMSFIN               ;FIND
            BCS     20$                     ;
            SUB     #1,(SP)                 ;DECREMENT COUNT
            SBC     2(SP)                   ;
            BNE     20$                     ;
            TST     (SP)                    ;
            BNE     20$                     ;
            TST     (SP)+                   ;
            TST     (SP)+                   ;POP COUNT FORM STACK
            RTS     PC                      ;
            .END
```

4c. Build the following correction file using an editor and name it: RPGIO.COR

```
            .TITLE  RPGIO
            .IDENT  /V8.03/ ;30-JAN-79 YL
            .MCALL  $REWIND
      $$BASE=.
      .     =$$BASE+304
            BR      CHKERR
      RMSRWD::$REWIND R5
      CHKERR::JSR     PC,$ERRMS
            RTS     PC
            .END
```

5. Assemble the source and correction files as follows:

```
RUN $MAC.TSK
MAC>XXORG=LB:RMSMAC/ML,[your acct]XXORG
MAC>XXRDM.PAT=XXRDM.COR
MAC>RPGIO.PAT=LB:RMSMAC/ML,[your acct]RPGIO.COR
MAC>^Z                                          (CTRL/Z to exit)
```

6. Extract the original modules as follows:

```
RUN $LBR.TSK
LBR>XXRDM.OLD=$RPGCOM/EX:XXRDM
LBR>RPGIO.OLD=$RPGCOM/EX:RPGIO
LBR>^Z                                          (CTRL/Z to exit)
```

7. Run the patch utility to merge the old modules and corrections:

```
RUN $PAT.TSK
PAT>XXRDM=XXRDM.OLD/CS:163132,XXRDM.PAT/CS:021615
PAT>RPGIO=RPGIO.OLD/CS:102306,RPGIO.PAT/CS:020041
PAT>^Z                                          (CTRL/Z to exit)
```

8. Replace the new and patched modules in the libraries:

```
RUN $LBR.TSK
LBR>$RPGLIB/RP=XXORG
LBR>$RPGCOM/RP=XXRDM
LBR>$RPGCOM/RP=RPGIO
LBR>^Z                                          (CTRL/Z to exit)
```

9. You should now take whatever steps are necessary, according to your installation guidelines, to save the new source and correction files.

10. The command file and other files used during the patching procedures should now be removed from the public structure.

11. Re-build your tasks to run with the corrections installed.

RPG II V8.02
for RSTS/E V6C
OTS V8.02T

Seq 32.3.23 M

RPG ERROR #15 OCCURS IMPROPERLY - MANDATORY OTS PATCH (YL)

PROBLEM:

RPG ERROR #15 will occur if a READ operation follows after an unsuccessful CHAIN operation.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library file RPGCOM.OLB is located on the public disk structure in the system library account ($). If this file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXRDM.COR

```
        .TITLE  XXRDM -- RPG RANDOM FILE I/O
        .IDENT  /V8.03/ ;27-FEB-79 YL
        CB=%2
        CR=%3
        F.STAT=77
        X.ERR=252
$$BASE=.
.       =$$BASE+12
        JSR     PC,$$BASE+1106
.       =$$BASE+1106
        CLRB    F.STAT(CB)      ;CLEAR ERROR STATUS IN FCB
        CLR     X.ERR(CR)       ;CLEAR ERROR STATUS IN COM REGION
        RTS     PC
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXRDM.PAT=XXRDM.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXRDM.OLD=$RPGCOM/EX:XXRDM
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXRDM=XXRDM.OLD/CS:000131,XXRDM.PAT/CS:006006
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGCOM/RP=XXRDM
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02
for RSTS/E V6C
OTS V8.02T

Seq 32.3.24 M

1 of 2

/BU: SWITCH IN RPGASN.DAT DOES NOT FUNCTION - MANDATORY OTS PATCH (YL)

PROBLEM:

The RPG OTS ignores the bucket size switch (/BU:) specified in the RPGASN.DAT file, when a new file is created.

SOLUTION:

The patch detailed below corrects the problem.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library file RPGCOM.OLB is located on the public disk structure in the system library account ($). If this file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXOPN.COR

```
        .TITLE  XXOPN -- OPEN RPG OTS FILES
        .IDENT  /V8.04/ ; 1-MAR-79 YL
        .MCALL  FABOF$
        FABOF$  RMS$L
$$BASE=.
.       =$$BASE+1774
        JSR     PC,$$BASE+2736
.       =$$BASE+2736
        TSTB    O$BKS(R5)       ;BUCKED SIZE SPECIFIED?
        BNE     10$             ;YES
        MOVB    R3,O$BKS(R5)    ;SET DEFAULT BUCKET SIZE
10$:    RTS     PC
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXOPN.PAT=LB:RMSMAC/ML,[your acct]XXOPN.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXOPN.OLD=$RPGCOM/EX:XXOPN
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXOPN=XXOPN.OLD/CS:151262,XXOPN.PAT/CS:011211
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGCOM/RP=XXOPN
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

RPG II V8.02
for RSTS/E V6C
OTS V8.02T

Seq 32.3.25 M

CHAINED INPUT FILE OPENED AS UPDATE, CAUSES FILE SHARING PROBLEMS
- MANDATORY OTS PATCH (YL)

PROBLEM:

A file cannot be shared by more than one reader without specifying the /MU switch in the RPGASN.DAT file. RPG opens chained input files as update, causing file sharing problems.

SOLUTION:

The patch detailed below corrects the problem.

NOTE

Previous patches must be installed before this one.

PROCEDURE:

For purposes of the discussion, we will assume that the patching procedure will be performed in a privileged account, and that the OTS library file RPGCOM.OLB is located on the public disk structure in the system library account ($). If this file is not available as assumed, you should replace all of the file references according to the requirements of your installation.

The command file for this patch appears in patch kit version "G" or later. To apply the patch manually, perform the following RSTS/E system commands.

1. Build the following correction file using an editor and name it: XXOPN.COR

```
        .TITLE  XXOPN -- OPEN RPG OTS FILES
        .IDENT  /V8.05/ ;26-MAR-79 YL
; *** THIS IS A TEMPORARY OTS PATCH TO BYPASS COMPILER BUG.
; *** NAMELY, CHAINED INPUT FILE IS NOT A UPDATE FILE.
$$BASE=.
.       =$$BASE+1064
        NOP
        .END
```

2. Assemble the correction file as follows:

```
RUN $MAC.TSK
MAC>XXOPN.PAT=XXOPN.COR
MAC>^Z                                          (CTRL/Z to exit)
```

3. Extract the original module as follows:

```
RUN $LBR.TSK
LBR>XXOPN.OLD=$RPGCOM/EX:XXOPN
LBR>^Z                                          (CTRL/Z to exit)
```

4. Run the patch utility to merge the old module and correction:

```
RUN $PAT.TSK
PAT>XXOPN=XXOPN.OLD/CS:156220,XXOPN.PAT/CS:004542
PAT>^Z                                          (CTRL/Z to exit)
```

5. Replace the patched module in the library:

```
RUN $LBR.TSK
LBR>$RPGCOM/RP=XXOPN
LBR>^Z                                          (CTRL/Z to exit)
```

6. You should now take whatever steps are necessary, according to your installation guidelines, to save the correction file.

7. The command file and other files used during the patching procedures should now be removed from the public structure.

8. Re-build your tasks to run with the correction installed.

DIBOL-11/DECFORM V4D
for RSTS/E V6C
DIBOL-11 Language Reference Manual (AA-1760D-TC)

Seq 36.8.1 N

1 of 1

RENAM ARGUMENTS DESCRIBED INCORRECTLY (ES)

Section B.23, page B-43, of the DIBOL-11 Language Reference Manual, Order No. AA-1760D-TC, defines the arguments of the RENAM external subroutine incorrectly. This has been corrected in the recently published new edition of this document with Order No. AA-1760E-TC.

The calling sequence is of the form:

```
XCALL RENAM (ch, filespec1, filespec2)
```

where:

ch is an unused channel number (1-15).

filespec1 is the new file name.

filespec2 is the current file name.

The example at the bottom of the page also needs to be corrected to correspond to this change.

Example:

```
PROC
OPEN(1,O,'TEST')
WRITES(1,'TEST DATA')                ;CREATE A TEST FILE
XCALL RENAM(4,'NEWTST','TEST')       ;RENAME FILE FROM TEST TO
STOP                                 ;NEWTST
END
```

DIBOL-11/DECFORM V4C
for RSTS/E V6C
ISMUTL V04C

DMS-500 ACCESS TO DIBOL ISAM FILES - MANDATORY ISMUTL PATCH (GH)

PROBLEM:

ISAM files that are created by ISMUTL can not be randomly accessed by the DMS-500 functions.

SOLUTION:

The optional patch detailed below will correct this problem.

PROCEDURE:

1. For purposes of the discussion, we will assume that the files necessary to rebuild the ISAM Utility ISMUTL are located on the public disk structure. In the patching procedure, we will, therefore, refer to those files by the simplest form: <name>.DBL. If the files are not available as assumed, you should first copy all of these files from the distribution kit, as for example:

```
RUN $PIP.SAV
*SY:=<kit>:*.DBL,ISMUTL.*
*^Z

Ready
```

   Also, for purposes of presenting the patching procedure, we assume that the patching procedure will be performed in a privileged account.

2. The command file for this patch appears in patch kit version "G" or later. If you do not have that distribution, you can produce a command file by specifying a file for [logfile=] in the procedure below.

   To apply the patch manually, perform the following RSTS/E system commands.

```
RUN $CPATCH<cr>
<CPATCH's header line>

File to patch - RORG3.DBL=RORG3.DBL<cr>
#[logfile=]<cr>
*H/TMP02,/V<cr>
<tab>TMP02,<tab>D4<cr>
*AI<cr>
<tab>EOFLG,<tab>D1<cr>
<esc>*V<cr>
<cr>
```

```
*H/INXB06,/V<cr>
INXB06,<tab>INDXT=INXGRP<cr>
*AI<cr>
<tab>EOFLG=1<cr>
<esc>*V<cr>
<tab>    IF ((INXLVC-(INXLVC/2)*2).EQ.1) GO TO INXB02<cr>
*H/INXB03,/V<cr>
INXB03,<tab>    READS (9,RECBUF,INXB04)<tab><tab><tab><tab>;THIS IS A DO-WHILE
 STRUCTURE<cr>
*AI<cr>
<tab><tab>READS (9,LNKDAT)<cr>
<esc>*V<cr>
<tab><tab>XCALL DECML (RECBUF(1,1),TEMP00)<tab><tab>;CHECK FOR EOF KEY<cr>
*AV<cr>
<tab><tab>IF (TEMP00.NE.127) GO TO INXB08<cr>
*G/127/I/ .AND. TEMP00.NE.255/V<cr>
<tab><tab>IF (TEMP00.NE.127 .AND. TEMP00.NE.255) GO TO INXB08<cr>
*AI<cr>
<tab><tab>    EOFLG=2<cr>
<esc>*V<cr>
<tab><tab>    XCALL ASCII (255,RECBUF(1,1))<cr>
*H/INXB08,/V<cr>
INXB08,<tab><tab>DISPLAY (CHAN,RECBUF(1,KYLEN)) <tab><tab><tab>;WRITE THE KEY TO
 THE REAL INDEX<cr>
*AV<cr>
<tab><tab>READS (9,LNKDAT)<cr>
*KV<cr>
<tab><tab>DISPLAY (CHAN,DFNO)<tab><tab><tab><tab>;PUT OUT LINK DATA TO INDEX<cr>
*H/INXB05,/V<cr>
INXB05,<tab><tab>GO TO INXB03<cr>
*G/TO /I/(/G/03/I/,INXB08), EOFLG/V<cr>
INXB05,<tab><tab>GO TO (INXB03,INXB08), EOFLG<cr>
*H/IGRPND,/V<cr>
IGRPND,<tab>CHAN=1<cr>
*7AI<cr>
<tab>EOFLG=1<cr>
<esc>*V<cr>
<tab>INCR INXGRP<tab><tab><tab><tab><tab><tab>;COUNT OFF THE GROUPS USED<cr>
*EX<cr>
Patch from KB:[P,PN]CPATCH.CMD complete
#^Z
File to patch - ^Z

Ready
```

3. Now first re-compile the source file you just patched by typing the following commands.

```
RUN $DICOMP.TSK
*RORG3.OBJ=RORG3.DBL/W/O

   NO ERRORS DETECTED
*^Z

Ready
```

4. To re-build the ISAM Utility and re-enter it into the system library, type the following RSTS/E commands. Note that you first must assign the logical device names and account.

```
ASSIGN SY:SRC

Ready

ASSIGN SY:LIB

Ready

ASSIGN [1,2]

Ready

RUN $TKB.TSK
TKB>ISMUTL=ISMUTL/MP
ENTER OPTIONS:
TKB>HISEG=DIBOL
TKB>//

Ready

RUN $PIP.SAV<cr>
*$ISMUTL.TSK=ISMUTL.TSK<cr>
*=$ISMUTL.TSK<104>/RE<cr>
*^Z

Ready
```

5. You should now take whatever steps are necessary, according to your installation guidelines, to save the new version of the patched source file.

6. Any ISAM files will have to be Reorganized or re-Created in order to take advantage of this correction.

RENAM ARGUMENTS DESCRIBED INCORRECTLY (ES)

Section B.23, page B-43, of the DIBOL-11 Language Reference Manual, Order No. AA-1760D-TC, defines the arguments of the RENAM external subroutine incorrectly. This has been corrected in the recently published new edition of this document with Order No. AA-1760E-TC.

The calling sequence is of the form:

```
XCALL RENAM (ch, filespec1, filespec2)
```

where:

ch is an unused channel number (1-15).

filespec1 is the new file name.

filespec2 is the current file name.

The example at the bottom of the page also needs to be corrected to correspond to this change.

Example:

```
PROC
OPEN(1,O,'TEST')
WRITES(1,'TEST DATA')                ;CREATE A TEST FILE
XCALL RENAM(4,'NEWTST','TEST')       ;RENAME FILE FROM TEST TO
STOP                                 ;NEWTST
END
```

FORTRAN IV/RSTS/E V2.1
for RSTS/E V6C
COMPILER

REGISTER ALLOCATION - PATCH 8 (MCdW)

PROBLEM: **The register allocation phase of the FORTRAN compiler produces incorrect inline code.**

SOLUTION:

1. Type in the following Macro files: FIXVER.MAC PAT08.MAC

```
            .TITLE   FROOT
            .IDENT   /07/
            .PSECT   ROOT
    .=.+372
           .ASCII    /5 /
            .END
```

```
                .TITLE  REGALO
                .IDENT  /006A/
                .PSECT  REGD2
        T:
        .=T+112
        U:

                .PSECT  REGI2

        S:
        .=S+10606
                .WORD   1454

        .=S+11370
                JSR     PC,PAT
                NOP

        .=S+11404
        R:
        .=S+11614
                JSR     PC,PAT1
                BCS     S+11572
        .=S+12070
                JSR     PC,PAT2

        .=S+12244
                .WORD   111500
                .WORD   006300
                .WORD   005760

                .PSECT  PATREG

        PAT:    TSTB    @R5
                BEQ     1$
                BICB    R(R0),1(R5)
        1$:     RTS     PC

        PAT1:   ADD     R3,R0
                TST     @R0
                BPL     2$
                CMP     R0,U
                BMI     2$
                CLC
                RTS     PC
        2$:     SEC
                RTS     PC

        PAT2:   TSTB    @R1
                BEQ     3$
                BICB    R(R0),1(R1)
        3$:     RTS     PC

                .END
```

2. Assemble the patch file using MACRO-11

```
SW RT11
.SI 28
.R MACRO
*FIXVER=FIXVER
*PAT08=PAT08
*^C
```

3. Install the patch, using PAT, to the most recent version of the compiler module:

```
.R PAT
FROOT=FROOT,FIXVER.OBJ
.R PAT
REGALO=REGALO,PAT08.OBJ
```

4. Rebuild the compiler using the procedure described in the FORTRAN Installation Guide.

5. Test the patch by compiling the following programs:

1.
```
FUNCTION ITEST(A)
INTEGER A(3,3),SUM
SUM=A(1,1)+A(2,2)+A(3,3)
TYPE *, A(1,3),A(2,2),A(3,1)
NSUM=SUM+A(1,3)
RETURN
END
```

2.
```
K=J
L=2*K/L
END
```

They should both compile without problems.

Note: For RSTS/E only.

If the new patched compiler gives an error message of "M-trap ...", please edit the file F4LINK.CMD and increase in the second line "/K:12." to a bigger number. Rebuild the compiler again.

REPEATED COMBINATION - PATCH 4 (MCdW)

PROBLEM: **A repeated combination of:**

open an old file
read from the file until the end
rewind the file
write to the file, and
close the file

causes a memory trap error.

SOLUTION:

1. Type in the following Macro file: PAT004.MAC

```
                .TITLE   $CLOSE
                .IDENT   /04/
                .PSECT   OTS$I
    S:
    .=S+226
                JSR      PC,PAT
                NOP
                .PSECT   PAT
PAT:            MOV      (SP)+,R0
                MOV      (SP)+,242(R3)
                MOV      (SP)+,R4
                MOV       R4 ,24(R3)
                JMP      @R0

                .END
```

2. Assemble the patch file using MACRO-11

```
SW RT11
.SI 28
.R MACRO
*PAT004=PAT004
*^C
```

3. Install the patch, using PAT, to the most recently patched OTS file: OTSCOM.OBJ

```
.R PAT
*OTSCOM=OTSCOM,PAT004.OBJ
```

All object files are included in the FORTRAN IV V2.1 distribution kit under account [1,2]. Make sure to always apply the patches to a copy of the distribution kit.

4. Rebuild the OTS using the procedure described in the FORTRAN Installation Guide. Use the recently patched module in the account where the installation will be done.

5. Test the patch by compiling, linking, and running the following program:

```
          PROGRAM PAT004
          DIMENSION ICHAR(80)
          OPEN(UNIT=1,NAME='ICHAR.DAT',TYPE='NEW')
          WRITE(1,100)
          CLOSE(UNIT=1)
          DO 10 I=1,5
          OPEN(UNIT=1,NAME='ICHAR.DAT',TYPE='OLD')
          READ(1,200)ICHAR
          REWIND 1
          WRITE(1,100)
    10    CLOSE(UNIT=1)
    100   FORMAT('ABCDEFG...')
    200   FORMAT(80A1)
          END
```

OPEN FAILURE WITH TYPE='OLD' - PATCH 6 (WM)

PROBLEM: **After an open failure with TYPE='OLD' a retry to open the same file with TYPE='NEW' fails.**

SOLUTION:

1. Type in the following Macro file: PAT006.MAC

```
                .TITLE  OPNSTM
                .IDENT  /12/
                .PSECT  OTS$I
    S:
    .=S+476
                JSR     PC,PAT
                .PSECT  PAT
    PAT:
                MOV     #2,R1
                BIC     #400,@R4
                RTS     PC
                .END
```

2. Assemble the patch file using MACRO-11

```
SW RT11
.SI 28
.R MACRO
*PAT006=PAT006
*↑C
```

3. Install the patch, using PAT, to the most recently patched OTS file: OTSCOM.OBJ

```
.R PAT
*OTSCOM=OTSCOM,PAT006.OBJ
```

All object files are included in the FORTRAN IV V2.1 distribution kit under account [1,2]. Make sure to always apply the patches to a copy of the distribution kit.

4. Rebuild the OTS using the procedure described in the FORTRAN Installation Guide.

5. Test the patch by compiling, linking, and running the following program:

```
      OPEN(UNIT=1,TYPE='OLD',ERR=1)
      STOP'FILE FTN1.DAT EXISTS'
1     OPEN(UNIT=1,TYPE='NEW',ERR=2)
      STOP'FILE OPENED OK'
2     STOP'FILE OPEN FAILED'
      END
```

which should produce the following output if FTN1.DAT doesn't exist:

```
STOP - FILE OPENED OK
```

FORTRAN LIBRARY FUNCTION ERRTST - PATCH 7 (WM)

PROBLEM:

The FORTRAN Library Function ERRTST fails to execute properly.

SOLUTION:

1. Type in the following Macro file: PAT07.MAC

```
                .TITLE $ERRTST
                .IDENT /03/
                .PSECT OTS$I
        S=.
        .=S+24
                JSR     PC,PAT
        .=S+64
                BIC     R2,226(R0)
                .PSECT  PAT
        PAT:
                MOV     R0,R1
                BIC     #^C<17>,R1
                RTS     PC
                .END
```

2. Assemble the patch using MACRO-11.

```
SW RT11
.SI 28
.R MACRO
*PAT07=PAT07
*↑C
```

Note: Make a copy of OTSCOM before you patch it just in case something goes wrong.

3. Install the patch, using PAT, to the most recently patched OTS file: OTSCOM.OBJ.

```
.R PAT
```

```
*OTSCOM=OTSCOM,PAT07
```

4. Rebuild the OTS using the procedure described in the FORTRAN Installation Guide.

5. Test the patch by compiling, linking, and running the following program.

```
                OPEN(UNIT=1,TYPE='OLD',ERR=1)
                STOP 'FILE FTN1.DAT EXISTS'
          1     CALL ERRTST(28,I)
                TYPE *,I
                STOP 'ERROR IN OPEN'
                END
```

Which will produce the following output if file FTN1.DAT doesn't exist.

```
          1
     STOP -- ERROR IN OPEN
```

FORTRAN CARRIAGE CONTROL OPTION - PATCH 9 (WM)

PROBLEM:

The FORTRAN carriage control option in the OPEN statement fails to execute properly.

SOLUTION:

1. **Type in the following Macro files:**

PAT09A.MAC and PAT09B.MAC

```
            .TITLE  $OPEN
            .IDENT  /03/
            .PSECT  OTS$0
S:
.=S+466
            BNE      A
.=S+474
A:
            .END
```

PAT09B.MAC

```
            .TITLE  $PUTREC
            .IDENT  /03/
            .PSECT  OTS$I
S:
.=S+46
            BNE     A
.=S+124
A:
            .END
```

2. **Assemble the patch file using MACRO-11**

```
SW RT11
.SI  28
.R MACRO
*PAT09A=PAT09A
*PAT09B=PAT09B
*↑C
```

3. Install the patch, using PAT, to the most recently patched OTS file: OTSCOM.OBJ

```
.R PAT
*OTSCOM=OTSCOM, PAT09A.OBJ
.R PAT
*OTSCOM=OTSCOM, PAT09B.OBJ
```

4. Rebuild the OTS using the procedure described in the FORTRAN Installation Guide. Use the recently patched module in the account where the installation will be done.

5. Test the patch by compiling, linking, and running the following program:

```
      OPEN(UNIT=1,NAME='TT:',TYPE='NEW',CARRIAGECONTROL='LIST')
      WRITE(1,100)
100   FORMAT('OTHIS LINE OUTPUT WITH CC="LIST"')
      CLOSE(UNIT=1)
      OPEN(UNIT=1,NAME='TT:',TYPE='NEW',CARRIAGECONTROL='FORTRAN')
      WRITE(1,200)
200   FORMAT('OTHIS LINE OUTPUT WITH CC="FORTRAN"')
      CLOSE(UNIT=1)
      OPEN(UNIT=1,NAME='TT:',TYPE='NEW')
      WRITE(1,300)
300   FORMAT('OTHIS LINE OUTPUT WITH NO CC SPECIFIED')
      CLOSE(UNIT=1)
      END
```

Which should produce the following output:

```
OTHIS LINE OUTPUT WITH CC="LIST"

THIS LINE OUTPUT WITH CC="FORTRAN"

THIS LINE OUTPUT WITH NO CC SPECIFIED
```

FORTRAN IV/RSTS/E V2.1
for RSTS/E V6C
OTS

Seq 41.3.6 M
1 of 2

ENDFILE STATEMENT - PATCH 10 (MCdW)

PROBLEM:

FORTRAN does not detect correctly the end of file written by and ENDFILE statement.

SOLUTION:

1. **Type in the following Macro file: PAT010.MAC**

```
                .TITLE $GETREC
                .IDENT /003/
                .GLOBL $EOF2
                .PSECT
        S:
        .=S+142
                JSR     PC,PAT

                .PSECT  PAT
        PAT:    CMPB    #3,R0
                BNE     3$
                JMP     $EOF2
        3$:     CMPB    #'Z-100,R0
                RTS     PC
               .END
```

2. **Assemble the patch file using MACRO-11**

```
SW RT11
.SI 28
.R MACRO
*PAT010=PAT010
*↑C
```

3. Install the patch, using PAT, to the most recently patched OTS file: OTSCOM.OBJ

```
.R PAT
* OTSCOM=OTSCOM,PAT010.OBJ
```

4. Rebuild the OTS or compiler using the procedure described in the FORTRAN Installation Guide. Use the recently patched module in the account where the installation will be done.

5. Test the patch by compiling, linking and running the following program:

```
            PROGRAM PAT010
            A=10
            WRITE (1,100) A
            ENDFILE 1
            REWIND 1
10          READ (1,100, END=200) B
            TYPE 100, B
            GOTO 10
200         STOP 'END'
100         FORMAT (F10.1)
            END
```

RSTS/E V6C
CUMULATIVE INDEX
MAY 1979

This is a complete listing of all articles for RSTS/E V6C and layered products. **Missing sequence numbers may pertain to problems unique to other versions of the same product or other major operating systems.**

IMPORTANT!

The following numerical system has been grouped in logical order denoted by the first digit (X.X.X). The second digit (X.X.X.) refers to the subcomponent and the third digit (X.X.X) denotes the issue number or sequential order.

Retracted articles are indicated: RETRACTION.

Flags are currently being installed for all articles. The flags and definitions are as follows.

M = Mandatory patch. These are critical patches which each customer is required to install.

O = Optional patch. These articles are applicable only if the reported problems have occurred at the customer site or if they are unique to his operation.

R = Restriction. These problems are not patchable in released software. Restrictions are reviewed and corrected when possible as part of the normal release cycle.

N = Note. This information may be helpful to the user.

* = Articles appeared in RSTS/E Release Notes, December 1977 (AA-5246B-TC).

+ = Articles appeared in RSTS/E Software Dispatch Review, January 1978 (AA-5514B-TC).

** = Articles appeared in CTS-500 DIBOL-11 Release Notes June 1978 (AA-55048-TC)

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OVERLAID TASKS ABORT WHEN BUILT WITH UNITS=14	21.3.5 M	Aug 78
LOGICAL SUBSTITUTION FOR "OV" AND "CL" INCORRECT	21.3.6 M	Aug 78
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GLUN DIRECTIVE NOT CHECKING FOR UNASSIGNED LUNS	21.7.3 M	Jul 78
OVERLAID TASKS ABORT WHEN BUILT WITH UNITS=14	21.7.4 M	Aug 78
LOGICAL SUBSTITUTION FOR "OV" AND "CL" INCORRECT	21.7.5 M	Aug 78
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Component	Sequence	Mon/Yr
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PIP.SAV		
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/DELETE OPTION IS INCONSISTENT BETWEEN PIP.SAV AND PIPEXT	22.13.3 O	Sep 78
ACCOUNTING STATISTICS NOT RESET ON FILE MERGE OPERATIONS	22.13.4 M	Feb 79
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EXTRA CHARACTERS MAY RESULT IN COMPILER TRAPPING	23.2.4 M+	Jan 78
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FILES ALLOCATED MORE THAN 32767 BLOCKS ARE LOADED INCORRECTLY	24.2.1 M+	Jan 78
DMSUTL DOES NOT HANDLE SYSTEM LOGICAL NAME	24.2.2 R	Jul 78
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DMSFSS		
BLOCKS GET PERMANENTLY LOCKED IN UPDATE MODE	24.3.1 M+	Jan 78
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DMSISR		
BLOCKS GET PERMANENTLY LOCKED IN UPDATE MODE	24.4.1 M+	Jan 78
BASIC-PLUS SOURCE FILE CORRECTIONS	24.4.2 M	May 78
DMS-500 ACCESS TO DIBOL ISAM FILES	24.4.3 O	May 79
DMSISC		
CORE RESIDENT INDEX LOCKS FILE	24.5.1 M	May 79
DMSRAR		
BLOCKS GET PERMANENTLY LOCKED IN UPDATE MODE	24.6.1 M+	Jan 78
DMS-500 ACCESS TO DIBOL ISAM FILES	24.6.2 O	May 79
DMSISA		
BLOCKS GET PERMANENTLY LOCKED IN UPDATE MODE	24.7.1 M+	Jan 78
BASIC-PLUS SOURCE FILE CORRECTIONS	24.7.2 M	May 78
DMS-500 ACCESS TO DIBOL ISAM FILES	24.7.3 O	May 79
INCORRECT RECORD LOCK DURING ADD	24.7.4 M	May 79
DMSRAA		
BLOCKS GET PERMANENTLY LOCKED IN UPDATE MODE	24.8.1 M+	Jan 78
DMS-500 ACCESS TO DIBOL ISAM FILES	24.8.2 O	May 79

Component	Sequence	Mon/Yr
DMSISO		
FILES ALLOCATED MORE THAN 32767 BLOCKS ARE LOADED INCORRECTLY	24.10.1 M+	Jan 78
EXTEND MODE DESTROYS OVERFLOW AREA	24.10.2 M	May 79
OUTPUT MODE DOES NOT SET RECORD COUNT CORRECTLY	24.10.3 M	May 79
DMSRAO		
FILES ALLOCATED MORE THAN 32767 BLOCKS ARE LOADED INCORRECTLY	24.11.1 M+	Jan 78
DMSFSX		
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IAMGEN		
STRTAD ENTRY IN FDB IS NOT ALWAYS RESET	24.13.1 O+	Jan 78
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DSORT		
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DSORT PRODUCES MISORDERED OUTPUT FILE WITH CORRECT KEYFILE	24.22.1 M+	Jan 78
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MISORDERED OUTPUT FILE ADDENDUM	24.23.1 R	Jan 77
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SYSTEM UTILITIES PACKAGE

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DIBOL-11/DECFORM V1

#Articles appeared in CTS-500 DIBOL Release Notes, July 1977 (DEC-11-LCDAA-A-D).

PACKAGE NOTES		
OPTICAL PROCEDURES	26.1.1 N#	Jul 77
DICOMP		
COMMON VARIABLE PROBLEM IN DICOMP	26.4.1 M#	Jul 77
PROBLEM WITH DECIMAL INITIAL VALUES	26.4.2 M#	Jul 77
DIBOL		
OPTIONAL PATCH TO ALLOW TEMPORARY PRIVILEGES	26.5.1 O#	Jul 77
ISAM KEY DISRUPTION ON LOCK ERROR	26.5.2 M#	Jul 77
DIBOL PROGRAM REMAINS RECEIVER FOLLOWING CHAIN	26.5.3 M#	Jul 77
ISAM ERRORS FOLLOWING SPLIT	26.5.4 M#	Jul 77
DIBOL PROGRAMS EXCEEDING AVAILABLE MEMORY	26.5.5 +	Jan 78
RECORD INTERLOCK PROBLEM	26.5.6 +	Jan 78

Component	Sequence	Mon/Yr
REMOTE LINEPRINTER SUPPORT UNDER DIBOL	26.5.7 R+	Jan 78
STACK OVERFLOWS	26.5.8 N+	Jan 78
"LINE TOO LONG" ERROR	26.5.9 M+	Jan 78
ENCOUNTERING RECORD LOCKS	26.5.10 M+	Jan 78
ILLEGAL RECORD NUMBER ERROR IN DIBOL	26.5.11 M+	Jan 78
CERTAIN ERRORS LEAVE BLOCKS LOCKED	26.5.12 +	Jan 78
RECORD LOCK ERRORS IN ISAM	26.5.13 N	Jan 78
PROBLEM WTIH MAGTAPE INPUT	26.5.14 M	Mar 78
DIBOL LPQUE RESTRICTION	26.5.15 R	Mar 78
PROBLEM WITH TERMINAL ECHO FOLLOWING DETACH	26.5.16 M	Mar 78
ERROR IN CLOSING OUTPUT FILES	26.5.17 M	Mar 78
ISAM LOCK ERROR DURING OPEN	26.5.18 M	Mar 78
ERROR IN ISAM FCB UPDATE	26.5.19 M	Mar 78
UPDATING LAST RECORD IN A FILE	26.5.20 R	May 78
PROBLEM WITH TERMINAL NUMBERS ABOVE 63	26.5.21 R	Jun 78
PROBLEM WITH ISAM UNLOCK	26.5.22 M	Jun 78
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DIBOL RESTRICTION	26.5.24 R	Jul 78
PROBLEM WITH ISAM READS	26.5.25 M	Jul 78
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PROBLEM FOLLOWING OPEN WITH ILLEGAL FILENAME	26.5.28 M	Nov 78
DECFORM		
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FOCOMP ERRORS DEALING WITH COMMAND LINE PROBLEMS, MEMORY MANAGEMENT ERRORS AND OTHER ASSORTED PROBLEMS	26.6.2 M#	Jul 77
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LOGICAL DEVICE NAMES AND PPNs IN DECFORM	26.6.4 R#	Jul 77
INTREG OPTION USED WITHOUT ANY BATCH TOTAL REGISTERS	26.6.5 R#	Jul 77
BAD CHARACTER ERROR IN DECFORM	26.6.6 N#	Jul 77
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MEMORY MANAGEMENT ERROR IN FOCOMP	26.6.9 M+	Jan 78
ADDITIONAL INFORMATION ON MATH OPTION	26.6.10 R+	Jan 78
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NOT A OR D ERROR MESSAGE CAUSED BY FOCOMP	26.6.12 M	May 78
EOF AFTER CHANGED RECORD	26.6.13 M	May 78
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ISMUTL INDEXING PROBLEMS AND BASIC-PLUS COMPATIBILITY	26.7.1 M#	Jul 77
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CHANNEL IN USE ERROR IN REORG	26.7.3 M+	Jan 78
ISMUTL RECORD LENGTH PROBLEM	26.7.4 M+	Jan 78
LEGAL CHARACTERS IN ISAM RECORDS	26.7.5 R	May 78
ISMUTL FAILS ON TERMINATOR CHARACTERS IN THE KEY	26.7.6 R	Jun 78
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BASIC-PLUS-2

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VIRTUAL ARRAY ELEMENTS MAY BE MISALIGNED	27.2.1 M*	Dec 77
POSSIBLE FATAL ERRORS ON "PRINT-USING" STATEMENTS	27.2.2 M*	Dec 77
ERRORS ON ACCESSING VARIABLES WITH DEBUGGER AND "TSK" OUTPUT	27.2.3 M*	Dec 77
LARGE TERMINAL WIDTHS PRODUCE FATAL ERRORS	27.2.4 M*	Dec 77
POST MORTEM DUMP OPTION ALWAYS ENABLED ON "TSK" OUTPUT	27.2.5 O*	Dec 77
NAME AS WITH SUBSCRIPTED VARIABLES CAUSES ERRORS	27.2.6 M+	Jan 78
NUM AND NUM2 DO NOT FUNCTION CORRECTLY	27.2.7 M	Jul 78
BASIC2 RUN-TIME SYSTEM PATCHES		
POSSIBLE UNIBUS TIMEOUT FATAL ERRORS ON STRING EQUATES	27.3.1 M*	Dec 77
POSSIBLE UNIBUS TIMEOUT FATAL ERRORS ON PRINT-USINGS	27.3.2 M*	Dec 77

Component	Sequence	Mon/Yr
CLOSING A WRITE LOCKED OR HUNG DEVICE RESULTS IN A LOOP	27.3.3 M*	Dec 77
CHAINING TO A BASIC-PLUS PROGRAM FROM BASIC-PLUS-2 MAY RESULT IN SCALE FACTOR INTERLOCK	27.3.4 M*	Dec 77
ERROR TRAPPING OUT OF STRING FUNCTION GIVES MEMORY MANAGEMENT VIOLATION	27.3.5 M*	Dec 77
LARGE TERMINAL WIDTHS PRODUCE FATAL ERRORS	27.3.6 M*	Dec 77
DEBUG MAY IGNORE BREAK IN USER FUNCTION	27.3.7 M*	Dec 77
AN ATTEMPT TO USE A SUBSCRIPT OUT OF RANGE IN DEBUG WILL GIVE MEMORY MANAGEMENT ERRORS	27.3.8 M*	Dec 77
UNQUOTED STRINGS OR "&" AT END OF DATA STATEMENTS CAUSE READ ERRORS	27.3.9 M*	Dec 77
DEVICE "TI:" NOT PROPERLY HANDLED	27.3.10 M*	Dec 77
ILLEGAL FILENAME MAY NOT GIVE ERROR	27.3.11 M*	Dec 77
POSSIBLE BAD DATA IF VIRTUAL ARRAY READ CAUSES ERROR	27.3.12 O	Jan 78
PRINT USING IGNORES TRAILING ASTERISK	27.3.13 M	Jan 78
PRINT USING RETURNS ERROR INDICATOR FOR NEGATIVE NUMBERS	27.3.14 M	Jan 78
AN OPEN OF THE TERMINAL IGNORES ACTUAL WIDTH	27.3.15 M	Jan 78
VAL FUNCTION IGNORES SCALE FACTOR	27.3.16 M	Jan 78
NUM$ WITH SCALING CAUSES MEMORY ERRORS	27.3.17 M	Jan 78
RND DOES NOT RETURN TRULY RANDOM NUMBERS	27.3.18 O	Jan 78
INTEGER EXPONENTIATE MAY GIVE OVERFLOW ERROR	27.3.19 O	Feb 78
USE OF MODE A% CLAUSE IN OPEN CHANGES VALUE OF A%	27.3.20 M	Feb 78
FILE STRING SCAN (SYS(-10)) REPORTS ERRORS INCORRECTLY	27.3.21 M	Feb 78
RMS OPENS WITH SCALING MAY CAUSE ERRORS	27.3.22 M	Feb 78
INTEGER ARGUMENTS MAY GIVE MEMORY ERRORS	27.3.23 M	Feb 78
'E' FORMAT WITH SCALING INPUTTED ERRONEOUSLY	27.3.24 M	Feb 78
CHAIN DROPS PRIVILEGES	27.3.25 M	Feb 78
ALLOWING 24 HOUR TIME OPTION	27.3.26 O	Mar 78
SCALED ARITHMETIC LOSES ACCURACY	27.3.27 M	Mar 78
CERTAIN UNTRAPPABLE ERRORS SHOULD NOT BE	27.3.28 M	Mar 78
SINGLE ALPHA CHARACTERS WRONGLY ACCEPTED AS NUMERIC	27.3.29 M	May 78
UNASSIGNED	27.3.30	XXX XX
NUM1$(SINGLE PRECISION) MAY GIVE STRANGE RESULTS	27.3.31 M	May 78
CHANNEL 15 NOT CLOSED ON ATTACH SYS CALL	27.3.32 M	May 78
XLATE FUNCTION DOES NOT WORK PROPERL`Y	27.3.33 M	Aug 78
RANDOMIZE DOES NOT WORK PROPERLY	27.3.34 M	Aug 78
THE THREAD MA1$ IS NOT IN THE RUN TIME SYSTEM	27.3.35 M	Aug 78
SIGN FUNCTION (SGN) NOT RETURNING CORRECT VALUES	27.3.36 M	Aug 78
BP2COM RUN-TIME SYSTEM PATCHES		
USE OF BP2COM RTS MAY GIVE TASK BUILDER ERRORS	27.4.1 M*	Dec 77
POSSIBLE UNIBUS TIMEOUT FATAL ERRORS ON STRING EQUATES	27.4.2 M*	Dec 77
ERROR TRAPPING OUT OF STRING FUNCTION GIVES MEMORY MANAGEMENT VIOLATION	27.4.3 M*	Dec 77
DEVICE "TI:" NOT PROPERLY HANDLED	27.4.4 M*	Dec 77
CHANGING PROMPT FOR BP2COM WHEN DEFAULT RUN-TIME SYSTEM	27.4.5 O	Dec 77
CHAINING TO A BASIC-PLUS PROGRAM FROM BASIC-PLUS-2 MAY RESULT IN SCALE FACTOR INTERLOCK	27.4.6 M*	Dec 77
ILLEGAL FILENAME MAY NOT GIVE ERROR	27.4.7 M	Jan 78
BP2COM FAILS TO CHAIN TO INIT AT START-UP	27.4.8 O	Jan 78
STACK OVERFLOW ERRORS WHEN BP2COM IS DEFAULT RTS	27.4.9 M	Mar 78
CONTROL C OUT OF BP2COM GIVES ERRORS	27.4.11 M	Oct 78
SYSTEM SECURITY EXPOSURE WITH BASIC-2-PLUS KEYBOARD MONITOR	27.4.12 M	Nov 78
BASIC2 OBJECT LIBRARY PATCHES		
DEBUG MAY IGNORE BREAK IN USER FUNCTION	27.5.1 M*	Dec 77
AN ATTEMPT TO USE A SUBSCRIPT OUT OF RANGE IN DEBUG WILL GIVE MEMORY MANAGEMENT ERRORS	27.5.2 M*	Dec 77
MEMORY MANAGEMENT VIOLATION ON MATRIX INVERSION	27.5.3 M	Jan 78
KEYED GETS WITH STRING EXPRESSIONS GIVE ERRORS	27.5.4 M	Mar 78
UNDEFINED SYMBOL WHEN USING RESTORE	27.5.5 M	May 78
THE THREAD MA1$ IS NOT IN THE RUN TIME SYSTEM	27.5.6 M	Aug 78
UPDATE DOES NOT CORRECTLY SET RECORDSIZE	27.5.7 M	Oct 78
BP2COM OBJECT LIBRARY PATCHES		
POSSIBLE UNIBUS TIMEOUT FATAL ERRORS ON STRING EQUATES	27.6.1 M*	Dec 77
POSSIBLE UNIBUS TIMEOUT FATAL ERRORS ON PRINT-USINGS	27.6.2 M*	Dec 77
CLOSING A WRITE LOCKED OR HUNG DEVICE RESULTS IN A LOOP	27.6.3 M*	Dec 77
ERROR TRAPPING OUT OF STRING FUNCTION GIVES MEMORY MANAGEMENT VIOLATION	27.6.4 M*	Dec 77
LARGE TERMINAL WIDTHS PRODUCE FATAL ERRORS	27.6.5 M*	Dec 77

Component	Sequence	Mon/Yr
DEBUG MAY IGNORE BREAK IN USER FUNCTION	27.6.6 M	Jan 78
AN ATTEMPT TO USE A SUBSCRIPT OUT OF RANGE IN DEBUG WILL GIVE MEMORY MANAGEMENT ERRORS	27.6.7 M	Jan 78
UNQUOTED STRINGS OR "&" AT END OF DATA STATEMENTS CAUSE READ ERRORS	27.6.8 M	Jan 78
POSSIBLE BAD DATA IF VIRTUAL ARRAY READ CAUSES ERROR	27.6.9 M	Jan 78
PRINT USING IGNORES TRAILING ASTERISK	27.6.10 M	Jan 78
MEMORY MANAGEMENT VIOLATION ON MATRIX INVERSION	27.6.11 M	Jan 78
PRINT USING RETURNS ERROR INDICATOR FOR NEGATIVE NUMBERS	27.6.12 M	Jan 78
AN OPEN OF THE TERMINAL IGNORES ACTUAL WIDTH	27.6.13 M	Jan 78
NUM$ WITH SCALING CAUSES MEMORY ERRORS	27.6.14 M	Jan 78
VAL FUNCTION IGNORES SCALE FACTOR	27.6.15 M	Jan 78
RND DOES NOT RETURN TRULY RANDOM NUMBERS	27.6.16 M	Feb 78
INTEGER EXPONENTIATE MAY GIVE OVERFLOW ERROR	27.6.17 M	Feb 78
USE OF MODE A% CLAUSE IN OPEN CHANGES VALUE OF A%	27.6.18 M	Feb 78
FILE STRING SCAN (SYS(-10)) REPORTS ERRORS INCORRECTLY	27.6.19 M	Feb 78
RMS OPENS WITH SCALING MAY CAUSE ERRORS	27.6.20 M	Feb 78
INTEGER ARGUMENTS MAY GIVE MEMORY ERRORS	27.6.21 M	Feb 78
FORCING 'SHUTUP' SYS CALL TO CLOSE CHANNEL 15	27.6.22 M	Feb 78
'E' FORMAT WITH SCALING INPUTTED ERRONEOUSLY	27.6.23 M	Feb 78
CHAIN DROPS PRIVILEGES	27.6.24 M	Feb 78
ALLOWING 24 HOUR TIME OPTION	27.6.25 O	Mar 78
SCALED ARITHMETIC LOSES ACCURACY	27.6.26 M	Mar 78
CERTAIN UNTRAPPABLE ERRORS SHOULD NOT BE	27.6.27 M	Mar 78
KEYED GETS WITH STRING EXPRESSIONS GIVE ERRORS	27.6.28 M	Mar 78
SINGLE ALPHA CHARACTERS WRONGLY ACCEPTED AS NUMERIC	27.6.29 M	May 78
UNASSIGNED	27.6.30	XXX XX
NUM1$(SINGLE PRECISION) MAY GIVE STRANGE RESULTS	27.6.31 M	May 78
CHANNEL 15 NOT CLOSED ON ATTACH SYS CALL	27.6.32 M	May 78
XLATE FUNCTION DOES NOT WORK PROPERLY	27.6.33 M	Aug 78
RANDOMIZE DOES NOT WORK PROPERLY	27.6.34 M	Aug 78
THE THREAD MA1$ IS NOT IN THE RUN TIME SYSTEM	27.6.35 M	Sep 78
SIGN FUNCTION (SGN) NOT RETURNING CORRECT VALUES	27.6.36 M	Aug 78
UPDATE DOES NOT CORRECTLY SET RECORDSIZE	27.6.37 M	Nov 78
BASRMS OBJECT LIBRARY PATCHES		
SCRATCH STATEMENT PRODUCES UNIBUS TIMEOUT ERRORS	27.7.1 M*	Dec 77
FILE ACTIVITY AFTER AN INDEXED OPEN MAY PRODUCE CERTAIN RMS ERRORS	27.7.2 M*	Dec 77
SCQUENTIAL VARIABLE RECORDS WITH ODD LENGTHS CAUSE ERRORS	27.7.3 M	Jan 78

COBOL-11 V3

PACKAGE NOTES		
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PIP CANNOT PROCESS LISTING FILES	28.1.3 N+	Jan 78
PROBLEM LIST	28.1.4 N+	Jan 78
REDUCED CONTENTION	28.1.5 N	Mar 78
COMMENT AFTER COPY	28.1.6 R	Mar 78
COPY STATEMENT	28.1.7 R	Mar 78
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COMPILER		
ABORT WHEN READING 88 LEVEL ITEM	28.2.1 M	Feb 78
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FINAL STATEMENT "EXIT PROGRAM"	28.2.3 R	Mar 78
ACCEPTING CBL PROG.CBL	28.2.4 R	Mar 78
FORMAT PROGRAMS	28.2.5 R	Mar 78
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DEFINING TOO MANY SYMBOLS	28.2.9 R	Mar 78
CALL STATEMENT MAY TERMINATE	28.2.10 N	Apr 78
UNSTRING STATEMENT	28.2.11 N	Apr 78
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OBJECT LIBRARY		
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IMPROPER TEST OF SIGNED SUBORDINATE DATA ITEM	28.3.2 M	Feb 78
USE PROCEDURE FAILURE	28.3.3 M	Feb 78
ACCEPT OVERWRITES	28.3.4 R	Feb 78
MULTITERMINAL SUPPORT ROUTINE "KBREAD"	28.3.5 N	Feb 78

Component	Sequence	Mon/Yr
ODL		
BUILDING COBOL-11	28.4.1 M+	Jan 78
PROGRAM USING SORT	28.4.2 R	Apr 78
DOCUMENTATION		
PDP-11 COBOL USER'S GUIDE		
REWRITING RECORDS	28.7.1 N	Mar 78
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PACKAGE NOTES		
GARBAGE IN BUFFER	29.1.1 N	May 78
CURRENT ODL OF CNVBLD.ODL WILL CAUSE STACK OVERFLOW	29.1.2 M	Sep 78
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GLUN DIRECTIVE NOT CHECKING FOR UNASSIGNED LUNS	29.2.1 M	Jul 78
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NCU DOES NOT CORRECTLY HANDLE DETECTION OF ANOTHER NCU	31.3.1 M	Jun 78
NCU DOES NOT CORRECTLY SET ITS RUN BURST AND PRIORITY	31.3.2 M	Oct 78
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NCROOT		
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Component	Sequence	Mon/Yr
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RPG II V8.02

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RPG PATCH FILES IN RSTS/E PATCH KIT	32.1.1 N	Jul 78
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RPGASN ALLOWS ONLY 84 ENTRIES	32.3.21 M	May 79
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/BU: SWITCH IN RPGASN.DAT DOES NOT FUNCTION	32.3.24 M	May 79
CHAINED INPUT FILE OPENED AS UPDATE, CAUSES FILE SHARING PROBLEMS	32.3.25 M	May 79
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DATATRIEVE-11 V1

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SKLTON		
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DECFORM DATA ENTRY FOR PROGRAMS	36.1.5 N**	Jun 78
ZONED ASCII ARITHMETIC FOR BP2COM V1.50	36.1.6 O	Dec 78
ZONED ASCII ARITHMETIC FOR BASIC2 V1.50	36.1.7 O	Dec 78
DOCUMENTATION		
INDIRECT COMMAND FILE SPECIFICATIONS	36.2.1 M	Jan 79
BUILD PROCEDURES		
DBUILD SUPERCESSION	36.3.1 N**	Jun 78
DICOMP SUPERCESSION	36.3.2 N**	Jun 78
DIBOLR		
RSTAT VALUES	36.5.1 N**	Jun 78
RMS CARRIAGE CONTROL ATTRIBUTE	36.5.2 N**	Jun 78
PROC NUMBER	36.5.3 N**	Jun 78
OPTIONAL PATCH TO EXPAND CALL/RETURN LIMIT (R6 STACK SPACE)	36.5.4 O**	Jun 78
MAXIMUM LENGTH ARGUMENTS	36.5.5 M	Feb 79
READ AFTER WRITE ON RELATIVE FILES	36.5.6 M	Mar 79
OUT OF MEMORY ERROR	36.5.7 M	Mar 79
DECFORM		
FOCOMR.MLB DECFORM LIBRARY	36.6.1 N**	Jun 78
NO RMS SEQUENTIAL FILE UPDATES	36.6.2 N**	Jun 78
FILE VALIDATION RECORD SIZE ERROR	36.6.3 N**	Jun 78
DATA ENTRY FOR OTHER PROGRAMS GIVES BAD MESSAGE	36.6.4 M	Mar 79
ERRORS IN THE GTFORM DATA ENTRY SUBROUTINE	36.6.5 O	Mar 79
RMS NOTES		
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OTHER RTSs AND ODLs	36.7.2 N**	Jun 78
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DIBOL-11 LANGUAGE REFERENCE MANUAL (AA-1760D-TC)		
RENAM ARGUMENTS DESCRIBED INCORRECTLY	36.8.1 M	May 79
CTS-500 DIBOL-11 USER'S GUIDE		
CLARIFICATION OF SAMPLE ODL FILE	36.9.1 M	Dec 78

DECAL V2

QUIZ		
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CREATE		
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CREATE AND LEDIT1	37.3.2 M	Sep 78
SORT1		
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BASIC2 COMPILER PATCHES		
SOME MIXED MODE ASSIGNMENT STATEMENTS GENERATE NO ERRORS	38.2.1 M	Nov 78
THE COMPILER EXPANSION OF A SYSTEM WIDE LOGICAL DEVICE NAME IS INCORRECT	38.2.2 M	Nov 78
OPTIMIZATION OF CONSTANTS CAN CAUSE ERRORS	38.2.4 M	Nov 78
BASIC2 RUN-TIME SYSTEM PATCHES		
NAME AS STATEMENT DOES NOT WORK PROPERLY, AND MAGTAPE (BACKSPACE) FUNCTION DOES NOT WORK PROPERLY	38.3.1 M	Nov 78
UNLOCK STATEMENT DOES NOT WORK PROPERLY	38.3.2 M	Oct 78
DEBUG LET STATEMENTS DO NOT WORK PROPERLY	38.3.3 M	Oct 78
UNASSIGNED	38.3.4	XXX XX

Component	Sequence	Mon/Yr
A NEGATIVE INDEX IN AN ON GOTO STATEMENT CAN CAUSE A PROGRAM CRASH	38.3.5 M	Nov 78
SGN FUNCTION DOES NOT WORK PROPERLY UNDER DOUBLE PRECISION	38.3.6 M	Nov 78
A NULL STRING PASSED TO A SUBPROGRAM WILL NOT BE UPDATABLE	38.3.7 M	Nov 78
MODE 8 PROCESSING DOES NOT WORK PROPERLY	38.3.8 M	Nov 78
NAME AS STATEMENT DOES NOT WORK PROPERLY, AND MAGTAPE (BACKSPACE) FUNCTION DOES NOT WORK PROPERLY	38.3.9 M	Nov 78
BP2COM RUN-TIME SYSTEM PATCHES		
SYSTEM SECURITY EXPOSURE WITH BASIC-PLUS-2 KEYBOARD MONITOR	38.4.1 M	Dec 78
A NEGATIVE INDEX IN AN ON GOTO STATEMENT CAN CAUSE A PROGRAM CRASH	38.4.2 M	Nov 78
A NULL STRING PASSED TO A SUBPROGRAM WILL NOT BE UPDATABLE	38.4.3 M	Nov 78
BASIC2 OBJECT LIBRARY PATCHES		
DEBUG LET STATEMENTS DO NOT WORK PROPERLY	38.5.1 M	Oct 78
BP2COM OBJECT LIBRARY PATCHES		
NAME AS STATEMENT DOES NOT WORK PROPERLY, AND MAGTAPE (BACKSPACE) FUNCTION DOES NOT WORK PROPERLY	38.6.1 M	Oct 78
UNLOCK STATEMENT DOES NOT WORK PROPERLY	38.6.2 M	Oct 78
DEBUG LET STATEMENTS DO NOT WORK PROPERLY	38.6.3 M	Oct 78
UNASSIGNED	38.6.4	XXX XX
A NEGATIVE INDEX IN AN ON GOTO STATEMENT CAN CAUSE A PROGRAM CRASH	38.6.5 M	Nov 78
SGN FUNCTION DOES NOT WORK PROPERLY UNDER DOUBLE PRECISION	38.6.6 M	Nov 78
A NULL STRING PASSED TO A SUBPROGRAM WILL NOT BE UPDATABLE	38.6.7 M	Nov 78
MODE 8 PROCESSING DOES NOT WORK PROPERLY	38.6.8 M	Nov 78
BASRMS OBJECT LIBRARY PATCHES		
WRITING PAST PHYSICAL END OF MAGTAPE IS NOW TRAPPABLE	38.7.1 M	Oct 78
WRITING PAST PHYSICAL END OF MAGTAPE IS NOW TRAPPABLE	38.7.2 M	Nov 78

DIBOL-11/DECFORM V4C

PACKAGE NOTES		
CTRL/C TRAPPING	39.1.1 N**	Jun 78
SYSTEM CONTROL PROGRAMS	39.1.2 N**	Jun 78
IMPROPER USE OF RUNJB	39.1.3 N**	Jun 78
DATA TYPE COMPATIBILITY	39.1.4 N**	Jun 78
DECFORM DATA ENTRY FOR PROGRAMS	39.1.5 N**	Jun 78
ZONED ASCII ARITHMETIC FOR BP2COM V1.50	39.1.6 O	Dec 78
ZONED ASCII ARITHMETIC FOR BASIC2 V1.50	39.1.7 O	Dec 78
CTSPIP		
INDIRECT COMMAND FILE SPECIFICATIONS	39.2.1 M	Jan 79
BUILD PROCEDURES		
DBUILD SUPERCESSION	39.3.1 N**	Jun 78
DICOMP SUPERCESSION	39.3.2 N**	JUN 78
DIBOL		
OPTIONAL PATCH TO EXPAND CALL/RETURN LIMIT (R6 STACK SPACE)	39.5.1 O**	Jun 78
MAXIMUM LENGTH ARGUMENTS	39.5.2 M	Apr 79
"HANG" PROGRAM ON LINE PRINTER OFF-LINE	39.5.3 O	Apr 79
OUT OF MEMORY ON REPEATED OPEN/CLOSE SEQUENCE	39.5.4 M	Apr 79
CHANNEL IN USE ERROR	39.5.5 M	Apr 79
ERROR 67 AFTER DETACH	39.5.6 M	Apr 79
DECFORM		
FOCOMP.MLB DECFORM LIBRARY	39.6.1 N**	Jun 78
ERRORS IN THE GTFORM DATA ENTRY SUBROUTINE	39.6.2 O	Mar 79
ISMUTL		
DMS-500 ACCESS TO DIBOL ISAM FILES	39.7.1 O	May 79
DIBOL-11 LANGUAGE REFERENCE MANUAL (AA-1760D-TC)		
RENAM ARGUMENTS DESCRIBED INCORRECTLY	39.9.1 N	May 79

COBOL-11 V3.1

COMPILER		
INVALID ERROR MESSAGE IS GENERATED BY THE COMPILER	40.2.1 N	Dec 78
MULTIPLE OCCURS CLAUSES	40.2.2 M	Dec 78
USER'S GUIDE		
KBREAD SUBROUTINE RETURNS AN ERROR NO. 31	40.7.1 N	Dec 78

FORTRAN IV/RSTS/E V2.1

PACKAGE NOTES		
FORTRAN IV V2.1 MAINTENANCE RELEASE	41.1.1 N	Dec 78
COMPILER		
PATCH 1	41.2.1 M	Feb 79
PATCH 2	41.2.2 M	Feb 79
PATCH 3	41.2.3 M	Feb 79
REGISTER ALLOCATION - PATCH 8	41.2.4 M	May 79
OTS		
SIMRT PROBLEMS - PATCH 5	41.3.1 M	Feb 79
REPEATED COMBINATION - PATCH 4	41.3.2 M	May 79
OPEN FAILURE WITH TYPE='OLD' - PATCH 6	41.3.3 M	May 79
FORTRAN LIBRARY FUNCTION ERRTST - PATCH 7	41.3.4 M	May 79
FORTRAN CARRIAGE CONTROL OPTION - PATCH 9	41.3.5 M	May 79
ENDFILE STATEMENT - PATCH 10	41.3.6 M	May 79

DATATRIEVE-11 V1.1

MINUS DOES NOT WORK	42.2.1 R	Mar 79
SORT MALFUNCTION FOR COMP-1, COMP-2, AND COMP-6 FIELDS	42.2.2 M	Mar 79
PROTECTION NOT CHECKED FOR PROCEDURE INVOCATION	42.2.3 M	Mar 79
GUIDE MODE ABORTS WITH SEVERE ERROR	42.2.4 M	Mar 79
ERROR IN THE DTR CODE	42.2.5 M	Apr 79

COBOL-11 V4.0

COMPILER		
CORRECTION TO RESTORE CORRECT FUNCTION TO /-BOU SWITCH	43.2.1 M	Apr 79
INITIALIZATION PROBLEM ON COMP-3 ITEMS	43.2.2 M	Apr 79
INVALID RESULTS FROM COMPUTE	43.2.3 M	Apr 79
SYNCHRONIZATION PROBLEMS	43.2.4 M	Apr 79
OTS		
MANDATORY PATCH FOR COBOL INTERACTIVE DEBUGGER	43.9.1 M	Apr 79
MANDATORY PATCH FOR DIVIDE AND COMPUTE	43.9.2 M	Apr 79
MANDATORY PATCH FOR BINARY SIZE ERROR	43.9.3 M	Apr 79
MANDATORY PATCH FOR UNSTRING	43.9.4 M	Apr 79
PERFORMANCE INCREASE - RELATIVE FILES	43.9.5 M	Apr 79
PERFORMANCE INCREASE - INDEXED FILES	43.9.6 O	Apr 79
OTS/COBOL INTERACTIVE DEBUGGER		
MANDATORY PATCH FOR CID ABORT	43.10.1 M	Apr 79

RPG-11 V7.06

RPG II V7.06 CAN NOT BE INSTALLED ON RSTS/E V06C-03	01 N*	Dec 77

digital

Software Product Description

PRODUCT NAME: DECAL, Version 2.0 **SPD 15.86.5**

Digital Equipment CAI Author Language System

DESCRIPTION:

DECAL, Digital Equipment CAI Author Language System, is the Computer Assisted Instruction (CAI) lesson authoring system. It is designed to enable teachers with no previous computer experience to provide individualized instruction for students. Written in BASIC-PLUS, the language of DIGITAL's Resource Sharing Timesharing System/Extended (RSTS/E), DECAL is suitable for use in any subject area and at all grade levels.

DECAL lessons can present textual material to a student, provide additional help at the student's request, anticipate and respond to both correct and incorrect responses, and dynamically determine sequences based upon those responses to individual lesson sections. Lessons can be up to 50 segments (questions) in length and can be linked with other lessons to form courses and be shared among schools. Students can leave a DECAL lesson at any point in the lesson, and later return to the lesson at the point where they left off. These features enable instructors to create effective lessons in the area of:

- drill and practice
- tutorials
- quizzes and tests
- dialog/inquiry sessions
- simulation and games
- problem solving

DECAL lessons are interactive and can provide "HELP" messages for all questions requiring a response from the instructor or student. The DECAL system includes provisions for administering, creating, and editing lessons; gathering and reporting lesson and individual student comments and statistics; and, at the discretion of the instructor, limiting and maintaining access to lessons via student directories.

Statistics are collected and stored automatically. Statistics included are the mean, variance, and standard deviation of student scores; summary of answer selections; response time statistics; the names, execution times, and execution dates of lessons and student comments; and summaries of failed questions. The programs are modular and enable the instructor to obtain reports on particular lessons, questions, or students.

Appropriately configured RSTS/E DECAL systems can handle up to 254 instructor accounts, and record statistics for up to 10,000 students.

MINIMUM HARDWARE REQUIRED:

Any valid RSTS/E configuration.

OPTIONAL HARDWARE:

Supports any device supported by the prerequisite software.

PREREQUISITE SOFTWARE:

RSTS/E Resource Sharing Timesharing System, V06A or later.

OPTIONAL SOFTWARE:

None

TRAINING CREDITS:

None

SUPPORT CATEGORY:

B — Software Support will be provided as stated in the Software Support Categories Addendum to this SPD.

UPDATE POLICY:

Software Updates, if any, released by DIGITAL during the one (1) year period following installation, will be provided to the customer for a media charge (includes no installation). After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

ORDERING INFORMATION:

All binary licensed software, including any subsequent updates, is furnished under the licensing provisions of DIGITAL's Standard Terms and Conditions of Sale, which provide in part that the software and any part thereof may be used on only the single CPU on which the software is first installed, and may be copied, in whole or in part (with the proper inclusion of the DIGITAL copyright notice and any DIGITAL proprietary notices on the software) only for use on such CPU. All source licensed software is furnished only under the terms and conditions of a separate Software Program Sources License Agreement between Purchaser and DIGITAL.

The following key (D, E, Q, T, V) represents the distribution media for the product and must be specified at the end of the order number, e.g., QPE10-XD = sources on 9-track magnetic tape.

D = 9-track Magnetic Tape
E = RK05 Disk Cartridge
Q = RL01 Disk Cartridge
T = RK06 Disk Cartridge
V = RK07 Disk Cartridge

QPE10 -X— Single-use license, source license, sources, documentation, support services (media: D, E, Q, T, V)

ADDITIONAL SERVICES:

None

The Digital Equipment Computer Users Society

DECUS

DECUS, the Digital Equipment Computer Users Society, was established in March of 1961 to advance the effective use of DIGITAL computers. It is a voluntary, not-for-profit users group, supported in part by Digital Equipment Corporation.

OBJECTIVES

The objectives of the Society are to advance the effective utilization of computers, computer peripheral equipment, and software manufactured and marketed by Digital Equipment Corporation, by promoting the interchange of information concerning their uses; advance the art of computation through mutual education and exchange of ideas and information; establish standards and provide channels to facilitate the exchange of computer programs among DECUS members; provide feedback to the computer industry on equipment and software needs; and to reduce the duplication of development efforts.

ACTIVITIES

1. SYMPOSIA

Symposia are held throughout the year in each of the DECUS Chapters. These meetings provide a forum for users of DIGITAL computers to meet with other users and with DIGITAL management, engineers, and Software Services and Field Service representatives. They are an opportunity for users to participate in DIGITAL Product Workshops and Product Planning feedback sessions. The technical papers and presentations from each symposium are published as DECUS Proceedings after each meeting and provide a permanent record of the meetings activities.

2. SPECIAL USER GROUPS

DECUS encourages subgrouping of users with common interests and/or geographical proximity.

Special Interest Groups (SIGs) promote the interchange of specialized information and have no geographical limitations. Specializations may be for application areas, subject areas (such as languages), or specific operating systems. A group of users must petition the Chapter Executive Board for recognition as a Special Interest Group. The group must have a chairman, and its organization must meet the guidelines of the Chapter Executive Board.

Examples of active SIGs are users of RSX-11, RSTS, RT-11 users, business system users, etc. For additional information, contact your Chapter Executive Secretary.

One of the most successful subgroupings are Local Users Groups (LUGs). There are numerous active LUGs in Australia, Canada, Europe, and the U.S. Local User Groups are basically geographic in nature; however, they may be geographic and specific as well.

The largest Special User Group is composed of users of the DECsystem-10 and DECsystem-20.

3. STANDARDS

DECUS promotes user activity in reviewing DIGITAL standards. Users are given the opportunity to comment on DIGITAL standards prior to their finalization.

4. PROGRAM LIBRARY

One of the major activities of the users group is the DECUS Program Library. The Library contains programs written and submitted by users and is maintained and operated separate from the Digital Software Distribution Center. A wide range of software is available, including languages, editors, numerical functions, utilities, display routines, and various other types of application software.

Library catalogs, updated periodically, contain descriptive abstracts and ordering information.

Information and forms for submitting programs to the Library may be obtained from local DECUS offices.

Programs are available to all members on a request basis. Orders for programs are made on DECUS Library Order Forms and directed to the local DECUS Chapter office. Information on the nominal service charge applied to most programs is published in the Library Catalogs.

As of January 1979, the Library contained approximately 1500 active software packages.

MEMBERSHIP

Membership in DECUS is voluntary and is not subject to a membership fee. Members are invited to take an active interest in the Society by contributing to the Program Library, to DECUSCOPE, and by participating in its Special User Groups and symposia. There are two types of membership: Installation Membership and Associate Membership.

INSTALLATION

An organization, institution, or individual that has purchased, leased, or has on order a computer manufactured by Digital Equipment Corporation is eligible for Installation Membership in DECUS. Membership status is acquired by submitting a written application to the appropriate Chapter Executive Secretary for approval by the Chapter Executive Board.

On acceptance of the application for membership, literature covering numerous DECUS services is sent to the Installation Delegate for reference and aid in maintaining active participation in the Society.

ASSOCIATE

Any person, who is not an appointed Installation Delegate, who has a bona fide interest in DECUS is eligible for Associate Membership.

Like Installation Members, Associate Members receive DECUSCOPE, the Society's quarterly newsletter, automatically. They may receive other DECUS material on request. Written application indicating desire to join must be submitted to the appropriate Chapter Executive Secretary for approval by the Chapter Executive Board.

On acceptance of the application for membership, literature covering the numerous DECUS services is sent to the member for reference and to enable active participation in the Society.

To obtain a membership form for DECUS, please return this form to the appropriate Chapter office listed below.

NAME: _____

COMPANY: _____

ADDRESS: _____

_____

CITY: _____

STATE/COUNTRY: _____ ZIP: _____

Membership form Requested (check one):

☐ Installation ☐ Associate February 1979

I obtained this form from _____.

DECUS OFFICES

DECUS Australia
P.O. Box 491
Crows Nest, New South Wales 2065
Australia

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12, avenue des Morgines
CH-1213 Petit-Lancy 1,
Geneva, Switzerland

DECUS U.S. and
Office of the Executive Director
One Iron Way
Marlboro, Massachusetts 01752
USA

SOFTWARE PROBLEMS OR ENHANCEMENTS

Questions, problems, and enhancements to DIGITAL software should be reported on a Software Performance Report (SPR) form and mailed to the SPR Center at one of the following DIGITAL Offices: (SPR forms are available from the SPR Center).

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